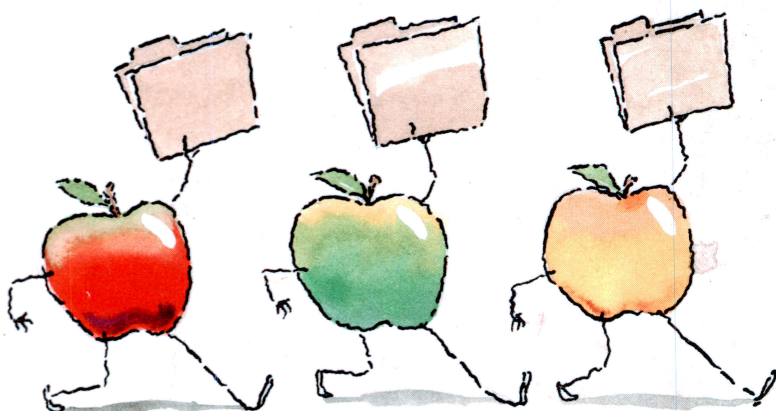# COMPUTE!'s

QUICK & EASY

GUIDE TO

APPLEWORKS™

Tom Dougher and Ellen Dougher

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QUICK
& EASY
GUIDE TO
APPLEWORKS™

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Foreword

AppleWorks is the leader in personal productivity software for the Apple II line of computers. The power of this program derives from a synergy between the three types of software that users most need for home and business applications—a database, a spreadsheet, and a word processor. It offers ways to tie the three together to produce almost any kind of report that you could want.

With *COMPUTE!'s Quick and Easy Guide to AppleWorks*, you'll discover how simple it is to master all aspects of this integrated software package. This guide is designed to give you a quick and painless way to accomplish any word processing, database-management, or spreadsheet-calculation project you may have in mind. If you already have an *AppleWorks* project underway, *COMPUTE!'s Quick and Easy Guide to AppleWorks* will help you zero in on solutions to any problems you may encounter. It offers concise discussions of *AppleWorks'* features, and aids such as the Command Summary, the Quick-Reference Command Chart, and the Keyboard Template make often-needed information available in an instant.

Maybe you've been considering some special tasks for *AppleWorks*, but weren't sure how to put them into effect. Or perhaps you've been searching for entirely new applications for the program. In either case, the "Ideas" chapter provides some original suggestions for putting *AppleWorks* through its paces.

Finally, the chapter on using *AppleWorks* with other products examines both software and hardware add-ons for *AppleWorks* and the Apple II family of computers. You'll find out which products are designed to meet your needs, which companies to contact for more details about those products, and how to get in touch with those companies.

COMPUTE!'s Quick and Easy Guide to AppleWorks offers every user the know-how to expand *AppleWorks* to the limits of its capabilities. You'll agree that it's designed to fit perfectly into your workspace—not on the shelf, but right by the computer.

Chapter 1
Introduction

Chapter 1
Introduction

Whether you're a seasoned Apple II user or a novice, these questions have surely haunted you after buying new software: Where do I go for help if I need it? How can I reap the full power of the program? *COMPUTE!'s Quick and Easy Guide to AppleWorks* is a reference guide designed to answer your questions and meet your needs as you begin to delve into *AppleWorks* and as you become adept with it and want to learn more.

The book is divided into clear-cut sections for both novice and power users. *COMPUTE!'s Quick and Easy Guide to AppleWorks* will lead you to just the information you need with its complete index and detailed table of contents. When you locate the information you want, you'll find the explanations easy to understand so you can learn to use the *AppleWorks* features that have helped to make it one of the bestselling integrated software utilities on record.

For the novice, Chapter 2,"Getting Started," and the "How To's..." in Chapter 3 preview in detail each program feature (the Word Processor, Spreadsheet, and Data Base) and their go-between functions (the Clipboard, Desktop, and file card–style menus). From there, try the keypress basics in Chapter 4, and you'll be on your way to discovering the power of *AppleWorks.*

The experienced user will find the Quick-Reference Command Charts especially helpful, as well as Chapter 6, "Power User Tips," an advanced section that provides hints on getting the most out of *AppleWorks.*

The Command Summary, the Keyboard Template, and the Quick-Reference Command Charts are three sections both novice and expert alike will use repeatedly. The Command Summary provides detailed descriptions of each application command for use within any of the three *AppleWorks* components. In one easily accessed location, you'll find lots of information about how to use each command.

The final "Ideas" chapter offers practical examples of the program in action in diverse working environments. These examples will help to expand your ideas on new ways to apply *AppleWorks* to your own projects—immediate ones as well as those you've always dreamed of starting, but didn't have the means to do so.

In Chapter 5, "Using *AppleWorks* with Other Products," you'll find the latest information on system add-ons and expansion utilities for use with *AppleWorks* 2.0 as well as older versions of the program.

The glossary and index sections found at the back of the book provide additional direction.

As with any endeavor, you learn best by doing. With *COMPUTE!'s Quick and Easy Guide to AppleWorks* at your fingertips, you will be able to dive right into the intricacies of the program with confidence.

All About *AppleWorks*

AppleWorks is the unchallenged leader in Apple II productivity software; it's a combination of three vital business tools— word processor, database, and spreadsheet—in one powerful package. It lets you create letters and documents, manage data, and analyze finances within a single program, and it allows you to cross over from one application to another in an instant. In addition, you can transfer information from one accessory to another—a dream of other personal computer users.

This transfer of information is achieved using the Clipboard feature, a temporary storage place where data you "cut" from one place waits to be "pasted" in another. The information you work with is held on the program's Desktop—a place in memory that keeps your work easily accessible—as if in file folders on your desk at home.

Before the advent of *AppleWorks*, using these three accessories, or *applications*, was tiresome and costly. First, learning three sets of instructions and commands from three sets of documentation meant a substantial investment of time. Then transferring information from, say, the spreadsheet to the word processor for the annual year-end stockholders report meant manually retyping the information from one application

to the other. Now, such tasks can be executed with ease, thanks to the integration of all three applications into one fully comprehensive *AppleWorks* package. Using the same programming syntax for each application, *AppleWorks* allows your spreadsheet figures to reside in the same report with information from the database and text from the word processor. Best of all, this transfer of information is achieved using just one set of commands and keypresses.

Who's Using *AppleWorks*?

There are countless uses for such a powerful productivity tool. Educators have found *AppleWorks* a great boon in battling stacks of paperwork. The spreadsheet serves as an electronic gradebook, the database becomes the manager of student enrollment records and lesson plans, and the word processor is used as a brainstorming tool for memos and project proposals.

A businessperson could conceivably start up the program in the morning and work efficiently in the *AppleWorks* environment throughout the entire day, calculating accounts receivable, creating job-order cost sheets, tracking inventory, and informing customers of shipment delays.

Students and home users can also enjoy the advantages of the *AppleWorks* organizational features. Almost any task can be performed using any combination of the applications: household budgeting, market forecasting, Christmas-card-list organizing, creating political-action and public-interest lists, and preparing correspondence. Databases and learning templates are becoming more and more prolific, offering educational adventures into history, mathematics, health, and the sciences.

Any number of add-on software packages are available as enhancements to the basic *AppleWorks* package—spelling and grammar checkers, dictionaries and thesauruses, Macro programs and calendar accessories—making the total *AppleWorks* work environment much more attractive.

The Latest Version of *AppleWorks*

AppleWorks version 2.0 brings with it reassuring solutions to several shortcomings cited since the program's last update over two years ago. The new mail-merge feature, several new spreadsheet functions, and all-around increased file capacity have served this new release well, and in the short time since its unveiling, sales have reportedly maintained a fivefold lead over competing personal productivity applications.

This new version provides another excellent software product for new users of Apple's latest hardware offering, the IIGS. *AppleWorks* 2.0 utilizes more memory all around, as it now requires a minimum 128K of machine memory rather than the old 64K standard, and it can hold files in the Spreadsheet, Data Base, and Word Processor well over twice the size of those the last version could hold.

Using the program with the aid of extra RAM (Random Access Memory, available by inserting a memory expansion card into a slot inside the computer) can enhance the program to an even greater degree. The Word Processor can expand from the old 37½ pages to as many as 511 pages, depending upon the amount of memory added. The other two applications in the program, the Spreadsheet and the Data Base, are also able to make use of the extra memory.

Until version 2.0 arrived on the scene, the Data Base was a less-than-optimal feature when used for address-list purposes. With the addition of mail-merge capabilities in this latest update, address data can now be tapped for use in mailing personalized form letters—an innovation long awaited by patient *AppleWorks* fans.

System Requirements

AppleWorks operates exclusively on the Apple II family of computers. It was programmed by Apple for Apples, so it's as close as you'll get to a true Apple computer application. Since the Apple II was introduced in 1977, six siblings have been born, expanding the Apple II family: the Apple II+, Apple IIe, Apple IIc, Apple IIe enhanced, Apple IIGS, and Apple IIc enhanced. Although *AppleWorks* was designed to run on the Ap-

ple IIe and later models, it can also run on an Apple II+, which has been upgraded to emulate the IIe. Following is a discussion of the hardware and software needed to run *AppleWorks*.

Hardware

You need a computer with at least 64 kilobytes (64K) of internal random access memory (RAM) and an 80-column text display capability. If you are using version 2.0 or later, you need at least 128K of RAM. The Apple IIe is configured with a minimum 64K of RAM, while the IIc and IIGS have a minimum configuration of 128K and 256K, respectively.

Although *AppleWorks* versions 1.0–1.3 have a minimum requirement of 64K, it is suggested that you have 128K of memory to use the program effectively. For example, 64K will only allow up to about 5 pages of text in the word processor, while 128K will allow 25 pages. As you will see later, *Apple-Works* relies heavily on internal memory for the operation of the three applications, plus the Desktop and the Clipboard, so the more the internal memory you have, the better. Apple Computer, as well as many other third-party suppliers, have memory expansion cards which are installed into your computer, and can expand your RAM to about any configuration you need, up to eight megabytes for an Apple IIGS. (See Chapter 5, "Using *AppleWorks* with Other Products," for a more detailed explanation of how to expand your computer's memory.)

Monitors for the Apple II family of computers come in three types: There are monochrome monitors, which display text and graphics as one color on a contrasting background; composite color monitors, which display color graphics and 40 column text; and RGB monitors, which display brilliant color graphics and both 40- and 80-column text. *AppleWorks* requires an 80-column display capability, so it works best with monochrome or RGB monitors. You can't use your television as a monitor with *AppleWorks*.

You will also need at least one disk drive to run *Apple-Works*, although you'll probably want to have two. Disk drives come in three different types for the Apple II family: standard

5¼-inch disk drives, which access disks that can store 140K of data; 3½-inch disk drives, which access disks with 800K of data; and hard disks which generally have a capacity figured in megabytes in some multiple of 5 (5, 10, 20, and so on). Running *AppleWorks* with only one 5¼-inch disk drive will require you to swap your program disk with your data disk many times during a typical work session. As of this printing, there were nine Apple-brand removable-media disk drives available for the Apple II family of computers. (With a removable-media disk drive, the disk can be taken out of the drive, while a hard drive has a disk that is not removable.) Apple does have a hard disk drive that can work with the Apple IIe—the Profile—but it is no longer sold as standard equipment. Until now, Apple has relied heavily upon third-party developers to supply Apple II owners with hard disks.

Although a printer is not required, one is highly recommended to use *AppleWorks* effectively. Beautifully formatted documents are one of the major features of *AppleWorks*, and a printer is a virtual necessity if you have any need at all to communicate your records and documents to others. *AppleWorks* easily supports the following printers: Apple Dot Matrix, Image-Writer, ImageWriter II, Daisy Wheel, Silentype, and Scribe; Epson FX, MX, and RX series and MX/Graftrax+; and Qume Sprint 5 and Sprint 11. These printers require minimal setup—simply connect one to your computer and select its name from an *AppleWorks* menu. There is also a utility that allows you to configure your system for a custom printer. With this option, you can virtually configure *AppleWorks* to work with any printer on the market. (See specifying information about your printer, in the "Using the Desktop" section, Chapter 3.)

Software

You will not need any additional software beyond what is in the package to operate *AppleWorks*. The program is delivered in both 5¼- and 3½-inch disk formats. Use the format that matches your main disk drive. If you are using the 5¼-inch format, you will need both *AppleWorks* Startup and *Apple-Works* Program which are delivered on one flip-sided disk,

storing information on both sides just as a phonograph album does. If you are using a system with a 3½-inch disk drive, you only need one program disk which contains both *AppleWorks* Startup and *AppleWorks* Program. (See Chapter 2, "Getting Started" for more on the program disks.)

AppleWorks uses the Professional Disk Operating System (ProDOS), which is already included on your program disks. If you are going to use data files (ASCII, *DIF*, or *Quick File*) that are formatted under another operating system (such as DOS 3.3 or Pascal), you will first need to convert them to the ProDOS format. Both the System Utilities disk that was included when you bought your Apple II system and the ProDOS User's Disk which you can purchase from your Apple dealer have utilities for converting disk formats.

System Requirements Summary		
	Apple IIe	**Apple IIc**	**Apple IIGS**
Required:	80-column card Disk drive Monitor *AppleWorks* 1.0–2.0	Monitor *AppleWorks* 1.0–2.0	Disk drive Monitor *AppleWorks* 2.0
Suggested:	Second disk drive Printer Extended 80-column card	Second disk drive Printer	Second disk drive Printer
Extra:	Memory expansion Hard disk	Memory expansion Hard disk	Memory expansion Hard disk

Chapter 2
Getting Started

Chapter 2

Getting Started

Before you jump into the program, you'll want to familiarize yourself with an overview. Here are descriptions of some of the activities you'll perform during each session with *Apple-Works*, along with references to find more detailed instructions elsewhere in the book.

Starting Up *AppleWorks*

Before starting up *AppleWorks,* be sure to make backup copies to avoid damaging the original disks. Use your Apple System Utilities disk or ProDOS User's Disk and refer to the system documentation for details.

While starting up *AppleWorks,* it's smart to keep a few preliminary checkpoints in mind:

• Before turning on your machine, make sure you've inserted the correct disk. If you are using a 5¼-inch disk drive, insert the Startup disk first, with the label side facing up. This should be a copy of the *AppleWorks* disk labeled *AppleWorks* Startup. Once it has started up, you'll be asked to insert the Program disk. This should be a copy of your *AppleWorks* disk labeled *AppleWorks* Program Disk. If you're using the small 3¼-inch disk, the Startup program is on the same disk as the *AppleWorks* program, so insert a copy of the *AppleWorks* disk labeled *AppleWorks* Startup, Program, and Sample Files.
• Always secure the disk drive door in the shut position when the program is operating. But if you're using 3½-inch *AppleWorks* disk and your computer has a 5¼-inch internal disk drive, keep the 5¼-inch disk drive door open and empty while the program is starting.
• Be sure all cable connections and wall plugs are secure.
• Double-check that your monitor is on.

After starting up the program, follow the instructions at the bottom of the screen. This line of directions is called the *prompt line,* and it will direct you to place the *AppleWorks*

Program disk in the drive or to press the space bar, de-
pending upon the size of the disk you are using. Before
taking you to the Main Menu, *AppleWorks* requires you to
enter the date, which will be used to date stamp your files
when saving them to disk.

The Main Menu

The Main Menu is the tip of the iceberg in *AppleWorks*. You
should return here after each session, and it is from this menu
that all other menus branch off. In keeping with Apple's file-
cabinet motif, the menus in *AppleWorks* appear as file cards,
fanning out into more cards as you are offered further menu
options.

The four arrow keys on your Apple keyboard, left (←),
right (→), up (↑), and down (↓), are used either to select menu
options or to move the cursor about on the screen or within
an entry.

File-card menu selections, at the Desktop level or else-
where, constitute the most common mode of interaction with
AppleWorks. To select one of the options from a menu, type
the number key corresponding to the option, or highlight the
option using the arrow keys to move to that selection, and
press Return.

The Desktop

In Chapter 3, "Using the Desktop," you'll learn the essentials
of file management and working within the menus on the
Desktop. Before you delve into the details, however, here are a
few basics you'll want to study in order to get a feel for the
overall scheme of things.

The documents you create and electronically store onto
a data disk are called *files*. Before you can create a file, you
must name it; before you can put it away, you have to save
it. When you go to retrieve it later, either to revise, review,
or print it out, you must first put it onto the Desktop.
When you are ready to file it away again, you can choose
to store it away with all your changes intact under the
same name, or you can save it under a new name and leave
the original version un-

changed. You can also opt to save one or both of these versions to a new, separate disk.

Options 1 through 4 on the Main Menu refer to the Desktop. This electronic workspace is where you can temporarily place up to 12 of your Word Processor, Data Base, and Spreadsheet files so that they can access each other. It's like having a number of projects you're working on within reach on your own desk at home or at work, but in *AppleWorks* you can only view one at a time. When you turn off your computer, the files on your desktop are lost; so when you finish working with a file, you'll want to file it away in the "file cabinet" by saving it onto your data disk for permanent storage.

The amount of memory the Desktop will use depends on how much memory your computer has (for example, for a 128K machine, the desktop will use 56K of memory), and any combination of large and small files may fill up the available memory before you've reached your allotment of 12.

The amount of available memory you have to work with is listed in the lower right portion of the screen whenever you see a list of your files.

Whenever you add, save, remove, or delete files from the Desktop, more than one file can be selected at a time. Use the right arrow to select a file, the left arrow to unselect a file, and the up arrow and down arrows to scroll through a list of files. An arrow next to a filename means it is selected. Press Return to complete your selections.

Creating Files

The first step in creating a file from scratch is to name it. Choose your filenames carefully, with mnemonics in mind, so that when you want to work with it again later, you can recognize its name and retrieve it. You can arrange files in a number of ways on disk to help you locate them in a hurry. An optional method you can learn more about later uses what are called *subdirectories*. These are comparable to the hanging file folders in a file cabinet; they organize a number of distinct subjects (your files) into familiar groups.

More commonly, though, you'll store files on data disks listed simply by name. It's a good idea to second-guess your needs and reserve one disk per specific topic so that all your personal files do not mingle with your business files, such as filing youth soccer with household finance.

Adding Files to the Desktop

To work with a file, you must first bring it onto the Desktop from the disk to which you last saved it. This function is carried out from the Add Files Menu, a branch from the Main Menu. There, you can determine whether to work with an existing file or to create a new one from scratch.

Before you can work with a file on the Desktop, you must tell *AppleWorks* which disk and which drive it is in. Unless you tell it otherwise, the program assumes you have only one disk drive, and it will look for your files in the drive that the program disk is in. This is fine, but it means swapping disks each time you want to call up a file from a data disk. The ideal solution is to use a second disk drive and set that drive as the *standard location* where the program will always search for and save your data. To learn how to set up a standard location for your files, see Chapter 3, "Using the Desktop."

The Clipboard

The Clipboard feature is the tool used to transfer material from one file to another with the Move and Copy commands described in the "Command Summary," Chapter 4. You can move information from file to file within the same application, from a Data Base or Spreadsheet file to a Word Processor file; or you can just move part of a file to some other location in the same file. Use the Chapter 3 section, "Using the Clipboard for Integration," to learn which keypress commands are used to move text and data from file to file. To move data between the database and spreadsheet is a different story, one which involves saving your data to a *DIF* file. See Chapter 3 for tips on saving information to a *DIF* file.

Like files on the Desktop, the Clipboard is only a temporary storage place in the computer's memory. The contents of

the Clipboard are safe until you turn off the machine or try to put something else there. Its contents are replaced each time you add something new to it.

The Prompt Line

The general keypresses used throughout *AppleWorks*, as well as most other software for your Apple, are for the most part self-explanatory once you become familiar with the program; they have been touched on briefly in the Main Menu and Desktop discussions above. But for those who like to be reassured with consistency, familiarity may come slowly; different levels in the program bring up familiar prompts that may require new or varied approaches in your response. Always keep your eye on the prompt line at the bottom line of the screen. It will tell you what *AppleWorks* is waiting for you to do. It usually tells you to type an entry, make a selection, or answer a question, and constant attention to this line is required throughout the program. At times, there are options much like menu options on the prompt line from which you need to select. To make a selection from the prompt line, just type the first letter of the option (*Y* for Yes, *N* for No, and so on), or use the left- and right-arrow keys to highlight the option and press Return.

Entering a Response

The cursor, which is either a solid block or a flashing underline, is present if *AppleWorks* expects you to type something, whether on the prompt line or elsewhere on the screen. When typing an entry, such as a filename or an entry into the Spreadsheet, Data Base, or Word Processor, the cursor indicates where the input will take place. Type the entry and press Return to confirm it. You may also use the left- and right-arrow keys to move the cursor within an entry for further editing.

Deleting an Entry

To delete an entry, place the cursor at the end of the entry and press Delete. Press Escape to restore an entry to what it was previously. You can delete an entire line of text by pressing the Control and Y keys at the same time. This is called a *Control Command.*

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Open Apple Commands

Additional keypress aids used throughout *AppleWorks* are
described in the "Keypress Command Summary" in Chap-
ter 4. In addition to Control Commands are Open Apple
Commands which require you to press the Open Apple key
(indicated by OA in this book) and another key at the same
time. Both are essential to the efficient use of the program.

The Help Command

One such Open Apple command you'll likely use often is
the Help Command. Press the Open Apple and question
mark keys simultaneously (OA-?) to see which commands
are available at that particular place in the program.

Escaping

The Escape key is used to return you to a previous screen,
menu, or entry. The results of pressing the Escape key can be
determined by looking at the top right of the screen. The word
or words following *Escape:* tell you where you will go or what
will happen if Escape is pressed. Use the Escape key as a fail-
safe last resort any time you're not sure where you are or if
you make an error during entry.

Formatting a Blank Disk

AppleWorks has a feature that allows you to format a blank
disk. You must format a disk in ProDOS (a disk operating lan-
guage) before anything can be stored on it. *AppleWorks* does
not recognize nonformatted disks or disks that were formatted
with operating systems other than ProDOS. *AppleWorks* uses
the current disk as its location for the format, so be sure that it
is set to the disk drive where your blank disk is rather than to
a ProDOS directory. To format a blank disk, first be sure there
is no write-protect tab on the disk. Select 5, Other Activities,
from the Main Menu; then select 5, Format a blank disk, from
the Other Activities menu. *AppleWorks* requires you to enter a
name for the disk. A disk name must start with a letter and
may contain up to 15 letters, numbers, and periods. Although
you are naming a ProDOS disk, you are not required to put a

slash (/) before the name. Make sure there is a disk in the current drive and that the drive door is closed. If there is a ProDOS formatted disk in the drive, *AppleWorks* requires you to verify that you would like to reformat it, by asking you to enter the word *YES*.

Making Backup Disks

Not only is saving your work important, but making a backup copy of what you save is just as important, because floppy disks are not as reliable as you would like them to be, and even hard disks are known to crash and lose data. One way to make a backup copy is to save a copy of a single file onto two different disks. You can do this directly from *AppleWorks*.

Another way to make a backup copy is to boot your System Utilities disk, ProDOS User's Disk, or other disk utility program, and to copy your whole disk, or individual files, to a backup disk.

Quitting the Program

It's helpful to know you can always quit *AppleWorks* at any time if you feel you're in over your head. To do this keep pressing Escape until you return to the Main Menu, and select option 6, Quit. If there are any new or changed files on the Desktop that have not been saved, *AppleWorks* allows you to save them first before exiting the program. Never exit AppleWorks without using the Quit option. This avoids the loss of any work you may have done.

Chapter 3
How to Use
AppleWorks

Chapter 3
How to Use *AppleWorks*

In this chapter, the three main parts of *AppleWorks*—the Data Base, the Word Processor, and the Spreadsheet—are introduced in detail. In addition, you'll see how the Desktop and the Clipboard make it possible to integrate the use of those components. Finally, there's a section that shows you how to use your own printer with *AppleWorks*.

Using the Desktop

The Desktop is your electronic workspace. Like a real desk top, it is a place where you put your files while working with them. Chapter 2, "Getting Started," provides a good overview of the Desktop. If you haven't already read that chapter, it's probably a good idea to do so before continuing with this one.

The Desktop is also the place where you begin all your work—no matter which application you're using—with the help of a series of menus. Each menu lists options for tasks

Figure 3-1. Screen Showing Three Overlapping Menus

```
Disk: Ext. disk //c            LIST ALL FILES      Escape: Other Activities
_____

 |————————————————————|
 |    Main Menu        |  |—————————————————————————————————|
 |                     |  |                                  |
 |  |———————————————————————|  |                            | |_
 |  |  Other Activities      |  |                          | |  |
 |  |                        |  |                          |_|  |
 |  |  |——————————————————————————————|                        |_|
 |  |  |  List All Files       |  |                           |_|
 |  |  |  Disk volume /CLASS has 114K available                 |
 |  |  |     Name          Type of file    Size   Date   Time   |
 |  |  |  ===================================================    |
 |  |  |  Letter.Parents   Word Processor   4K    2/21/87        |
 |  |  |  Football.Trivia  Data Base        4K    1/01/87        |
 |  |  |  Roster           Data Base        3K    2/21/87        |
 |  |  |  Budget           Spreadsheet      3K    1/14/87        |
 |  |  |  Check Register   Spreadsheet      3K    4/01/87        |
 |  |  |  Gradebook        Spreadsheet      5K    3/27/87        |
 |  |  |                                                         |
 |  |  |                                                         |
 |__|  |                                                         |
    |  |                                                         |
    |__|_____|
       |
_____
Use up/down arrows to move through list                        56K Avail.
```

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such as making new files; adding existing files to the Desktop (up to 12 at a time) or removing others; choosing a file to begin work on; saving revisions made to files; and so on. Each menu is titled according to the tasks it allows you to perform; its title appears at the top of the menu as well as on the top line of your screen. (Every screen in *AppleWorks* has a title, and this *Quick and Easy Guide* refers to the titles often, so that should help you keep track of where we are.)

The Desktop menus are arranged in a hierarchy: You continue choosing options to progress to the next submenu, or press Escape to return to the one previously displayed. Escape will continue to take you to the previous menu until you have reached the Main Menu. The Main Menu is the base of all the *AppleWorks* menus, so you need to take a look at it in order to begin work from the Desktop.

The Main Menu

The Main Menu manages the *AppleWorks* Desktop, your disks, and your printer (Figure 3-2).

Figure 3-2. Main Menu Screen

```
Disk: Ext. disk //c                    MAIN MENU
 _____
|    Main Menu           |                                       |
|                        |_____|
|                                                                |
|    1.  Add files to the Desktop                                |
|                                                                |
|    2.  Work with one of the files on the Desktop               |
|                                                                |
|    3.  Save Desktop files to disk                              |
|                                                                |
|    4.  Remove files from the Desktop                           |
|                                                                |
|    5.  Other Activities                                        |
|                                                                |
|    6.  Quit                                                    |
|                                                                |
|_____|


 _____
Type number, or use arrows, then press Return        ⌂-? for Help
```
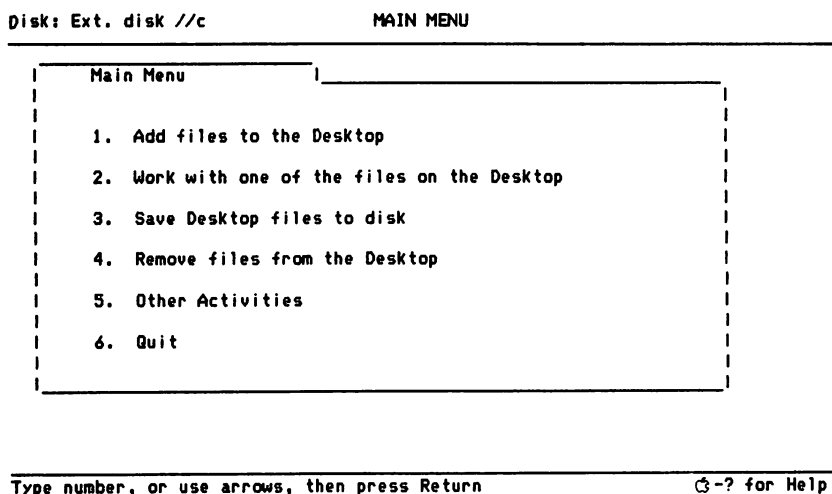
The upper left corner of the screen lists the disk currently in use. This lets you know where the program will search to find your files and where it will pu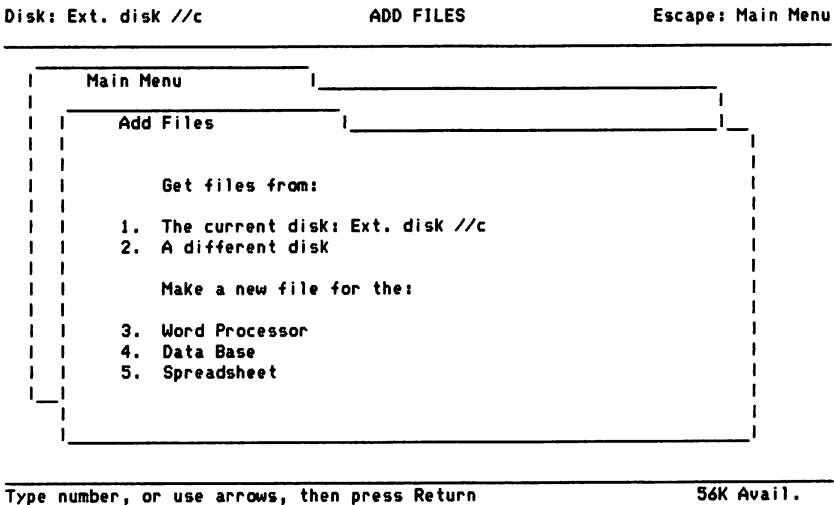t them when you save changes made to them. (This will be discussed in more detail later.) At the bottom of the screen is the prompt line. In the Main Menu, this tells you how to choose from the menu options. In other menus, it asks you to provide additional information needed for the program to continue. The lower right corner tells you how to get the Help screen: Press OA-? (press the Open Apple key and the question mark key at the same time) to display general information. At other points in the program, Help lists all the commands available to you at that time, a handy reference when you're unsure about a command you'd like to use.

Adding Files to the Desktop

The first option of the main menu is used to add files to the Desktop. You may add files from one of your disk drives, or create a new file for the Word Processor, the Data Base, or the Spreadsheet.

Figure 3-3. Add Files Screen

```
Disk: Ext. disk //c              ADD FILES              Escape: Main Menu
 _____
I       Main Menu          I_____
I     _____ I                                I
I   I     Add Files         I_____I__
I   I                                                         I
I   I                                                         I
I   I       Get files from:                                   I
I   I                                                         I
I   I     1.  The current disk: Ext. disk //c                 I
I   I     2.  A different disk                                I
I   I                                                         I
I   I       Make a new file for the:                          I
I   I                                                         I
I   I     3.  Word Processor                                  I
I   I     4.  Data Base                                       I
I   I     5.  Spreadsheet                                     I
I _I                                                          I
  _I                                                          I
   I_____I

Type number, or use arrows, then press Return        56K Avail.
```

Files may be added from your current disk or from a different one. When you're adding files from the current disk, a list of the files on the disk is presented on the screen. Besides the name of the file, the list includes each file's type (Word Processor, Data Base, or Spreadsheet), and the date and time it was last saved. (The time is only recorded if you have a hardware clock in your computer.)

Figure 3-4. Disk Index Screen

```
Disk: Ext. disk //c          APPLEWORKS FILES              Escape: Add Files
_____
I    Main Menu              I_____
I  I    Add Files          I_____I  I_
I  I                       I                                I  I
I  I  I  AppleWorks files   I_____I_
I  I  I  Disk volume /CLASS has 114K available               I
I  I  I      Name          Type of file    Size   Date   Time   I
I  I  I  =================================================      I
I  I  I  Letter.Parents    Word Processor   4K   2/21/87        I
I  I  I  Football.Trivia   Data Base        4K   1/01/87        I
I  I  I  Roster            Data Base        3K   2/21/87        I
I  I  I  Budget            Spreadsheet      3K   1/14/87        I
I  I  I  Check Register    Spreadsheet      3K   4/01/87        I
I  I  I  Gradebook         Spreadsheet      5K   3/27/87        I
I  I  I                                                         I
I__I  I                                                         I
   I  I                                                         I
   I__I_____I
_____
Use Right Arrow to choose files, Left Arrow to undo         56K Avail.
```

If you are making a new file for the Word Processor, the Data Base, or the Spreadsheet, *AppleWorks* first asks you to name the file. Then it transfers you directly into the application so that you can begin work on this new file.

If you have files from other Apple programs that you would like to use in *AppleWorks*, they must follow a specific file format (standard for communication between programs) chosen from the following options: text (ASCII), *DIF, Quick File,* or *VisiCalc* file. If you are making a new *AppleWorks* file, it must also be in one of those formats. ASCII (American Standard Code for Information Interchange) and *DIF* (Data Interchange Format) are two file formats that are generally accepted in the computer field, while *Quick File* and *VisiCalc* files are in formats used specifically by other popular application programs.

Besides being in the correct format, any files added from other Apple programs must also be ProDOS files. To convert files to ProDOS from other disk formats, such as DOS 3.3 or Pascal, use the System Utilities disk that was provided with your system, or a ProDOS User's Disk, which you can purchase from your Apple dealer. Refer to their documentation for detailed instructions on converting files to ProDOS.

The Current Disk

Whenever you add files to the Desktop from disk—or save files from the Desktop to disk—*AppleWorks* first asks you whether you would like to get the files from, or save the files to, the "current disk." *AppleWorks* uses the term *disk* loosely in this context, because the current disk can be any disk in a certain drive, a particular disk in any drive, or a subdirectory (referred to by *AppleWorks* as a ProDOS subdirectory) on a particular disk in any drive. If you have two disk drives, you will probably use one of your disk drives for your data disk and designate the current disk setting to that disk drive; but if you like, you can designate the current disk setting to access a subdirectory by setting it to a ProDOS prefix.

The ProDOS prefix, sometimes referred to as a ProDOS directory, is the *pathname* part of a subdirectory filename. Since subdirectories create file groups, they can become quite complex, so it's helpful for users to have "path" to help them find their way around them. The pathname, then, directs the *AppleWorks* user to a certain disk or disk subdirectory.

You can tell *AppleWorks* what the current disk is in a number of ways. First of all, whenever you are adding files to, or saving files from, the Desktop, *AppleWorks* always gives you the option to change to a different disk. If you choose this option, *AppleWorks* displays a menu of all of the disks that are attached to your computer, along with an option to use a ProDOS directory. This is actually asking whether you want to name a subdirectory for use as the current disk. Whatever disk you choose (or ProDOS prefix you enter) automatically becomes the new current disk.
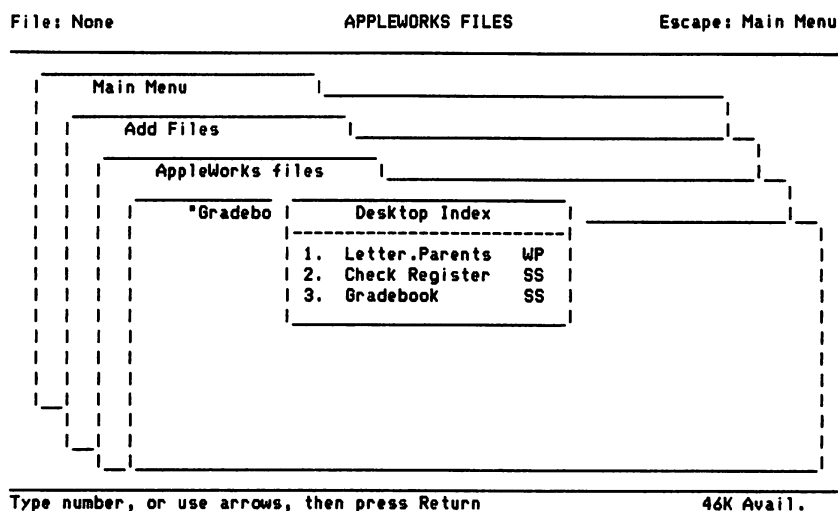
The other, more formal way to set the current disk is to select Other Activities from the Main Menu, followed by

either the first option, Change current disk drive or ProDOS prefix, or the sixth option, Select standard location of data disk. Both of these options allow you to set the current disk, but the latter also sets it as the default, or standard, current disk that *AppleWorks* uses the next time you start up the program.

Working with One of the Desktop Files

If you select only one file to add to the Desktop, *AppleWorks* loads the file directly into the application that created it and transfers you there so that you can work with it. If you select more than one file, a Desktop Index (a list of files that you just added to the Desktop) is displayed. The Desktop Index includes the filename and the file type for each of the files currently on the Desktop.

Figure 3-5. Desktop Index Window

```
File: None                   APPLEWORKS FILES              Escape: Main Menu
_____

   I     Main Menu          I_____
   I    _____                        I
   I   I   Add Files          I_____I__
   I   I  _____        I
   I   I I   AppleWorks files    I_____I__
   I   I I  _____     I
   I   I I I  "Gradebo I     Desktop Index       I _____I__
   I   I I I          I-------------------------I                  I
   I   I I I          I 1.  Letter.Parents  WP  I                  I
   I   I I I          I 2.  Check Register  SS  I                  I
   I   I I I          I 3.  Gradebook       SS  I                  I
   I   I I I          I_____I                  I
   I   I I I                                                       I
   I   I I I                                                       I
   I   I I I                                                       I
   I_I I I                                                       I
     I_I I                                                       I
       I_I_____I
_____
Type number, or use arrows, then press Return            46K Avail.
```

You can either choose to work with one of the files on this index or, by pressing Escape, return to the Main Menu. You can also get to the Desktop Index by choosing option 2 from the Main Menu: Work with one of the files on the Desktop. As a shortcut, you can get to the Desktop Index from any-

where in the *AppleWorks* program by pressing OA-Q* (short for Quick change). This is useful when you want to change quickly from one Desktop file to another.

Saving Desktop Files to Disk

As anyone who has lost hours of work to power failure (or by accidentally turning off the computer) can tell you, saving files to disk is something that you always do often. In *AppleWorks*, there are two different ways to save Desktop files to disk.

The first is the easiest: When working with a file inside one of the applications, press OA-S (Save). The file is saved on the current disk, replacing any older version of the file with the same name. If you would like to save the file without replacing any older version, first change its name using the Change Name command (OA-N).

Secondly, you can save one or many Desktop files using Main Menu option 3, Save Desktop files to disk. Saving files in this way is a little more deliberate and flexible because you have the option to save more than one file, to save to a different location, and also to change the names of any files you save. When saving in this way, *AppleWorks* displays your list of Desktop files with their status—either New, Changed, or Unchanged—their type, and their size. To save time, only save those that are New or Changed.

Whenever *AppleWorks* is actually saving the file to disk and the disk use light is on, you can cancel the save by pressing Escape.

Remember that whenever you choose to save a file to a disk other than the current one, the disk that you choose becomes your current disk.

Removing Files from the Desktop

At times you may need to make room for more files on the Desktop, since it can only have as many files as memory allows, or 12 files maximum, whichever comes first. To free up

---

* Open Apple Commands, which require you to press the Open Apple key and some other key simultaneously, are indicated in this book with the letters OA.

some room on the Desktop, you can remove files using Main Menu option 4. Choosing this option displays the Desktop Index—a list of your Desktop files with their status, type, and size. Select the files you want to remove from this list. Before *AppleWorks* removes the file from the Desktop, it checks the file's status to see if any new work you have entered will be lost by the removal. If the status is New or Changed, it reminds you that you have made changes to the file and allows you to save it before it is removed. On the other hand, if you decide that you would rather not save your changes, *AppleWorks* simply removes the file without saving it.

Listing All Files on the Current Disk

To list all of the files on your current disk, select Other Activities from the Main Menu, and then option 2, List all files on the current disk drive, from the Other Activities menu. A detailed list of your files, including the type, size, and date and time last saved, is displayed. Subdirectories and non-*AppleWorks* files are also included in this listing. Since, at times, *AppleWorks* requires you to enter a ProDOS prefix or pathname, you may need to use this option when you forget what you have named your disk, a subdirectory, or a non-*AppleWorks* file such as an ASCII, *DIF, Quick File,* or *VisiCalc* file.

Creating a ProDOS Subdirectory

Subdirectories allow you to organize groups of files on the disk directory, just as a hanging file allows you to group related documents in a file cabinet. For owners of 3½-inch or hard disk drives, subdirectories are almost essential, since 3½-inch disks can store hundreds of files, and hard disks can literally store thousands. When you set your current disk to access files in a subdirectory, the directory list will display only files within that subdirectory.

Before you can set your current disk as a subdirectory, you must first create one. To create a subdirectory, select Other Activities from the Main Menu; then select option 3, Create a subdirectory, from the Other Activities menu. At this point, *AppleWorks* requires you to enter the subdirectory's complete ProDOS pathname. Don't try to enter a ProDOS pre-

fix, which contains a slash (/), the disk name, another slash, and the subdirectory name. A complete ProDOS pathname consists of the disk name, the name of the subdirectory or subdirectories, and the filename, all separated by slashes. Since a subdirectory is considered a file itself, ProDOS allows you to put a subdirectory within another subdirectory.

For example, suppose you have a file named JIM which is inside a subdirectory named LETTERS. The subdirectory is on the disk named CORRESPONDENCE. The full ProDOS pathname for this file is

CORRESPONDENCE/LETTERS/JIM

If, on the other hand, *AppleWorks* requests the ProDOS prefix of the above example, you would type

CORRESPONDENCE/LETTERS

Like a filename, a subdirectory name must begin with a letter, and can contain up to 15 characters: upper- or lower-case letters; numbers; and periods.

If you wish to store files into a subdirectory, the designated current disk must be your subdirectory.

Deleting Files from the Current Disk

At times you may want to clean up one of your data disks by deleting unused or out-of-date files. To delete files from the current disk, select Other Activities from the Main Menu, then option 4, Delete files from disk, from the Other Activities menu. From the list that is displayed, select the files that you want to delete. For each file that you have selected, *Apple-Works* warns you that it is about to PERMANENTLY remove it from the disk and requires you to verify that you really want to delete it. *AppleWorks* allows you to delete subdirectories in the same way you delete files, but the subdirectory must first be empty. To delete a subdirectory from the disk, set the current disk to the subdirectory and delete all of its files. Then change the current disk to the root directory of the disk and delete the subdirectory.

31

Using the Word Processor

You can use the Word Processor either by starting a document from scratch or by choosing an already existing file from a list of disk files. The menus for these procedures are discussed at length in "Using the Desktop" at the beginning of this chapter. This section covers the features and commands available in the Word Processor and general tips on using them; it also includes a detailed explanation of the numerous printer options available. Refer to the Command Summary in Chapter 4 if you need additional help with any particular Word Processor command.

Figure 3-6. Blank Word Processor Screen

File: Memo	REVIEW/ADD/CHANGE	Escape: Main Menu

```
====|====|====|====|====|====|====|====|====|====|====|====|====|====|====|===
```

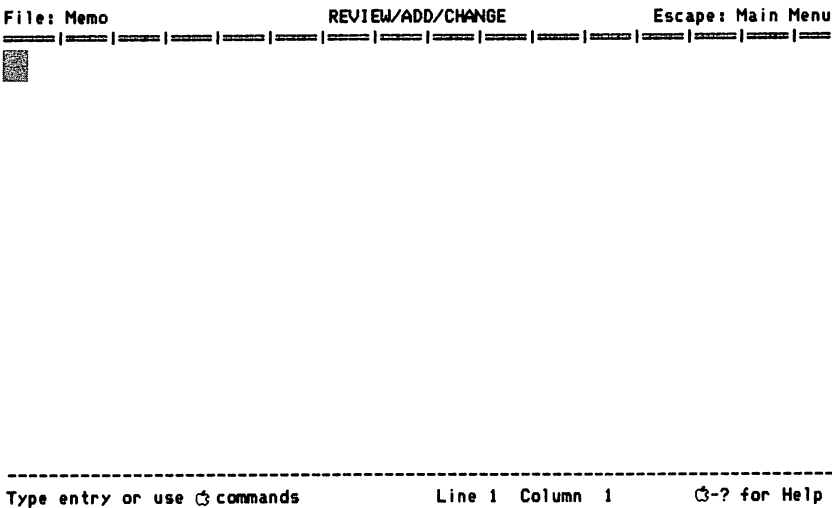|		
Type entry or use ₲ commands	Line 1 Column 1	₲-? for Help

Figure 3-6 shows the screen that you see when you first start a Word Processor document from scratch. The name of the file is displayed in the upper left corner of the display. This is the name that you give your file when you first create it. You can change the name of the file at any time during a word processing session by using the Name command (OA-N).*

---

* Open Apple Commands, which require you to press the Open Apple key and some other key simultaneously, are indicated in this book with the letters OA.

Changing the name is necessary when you want to the save the document as a new file on the disk and leave the original intact.

The title of the screen, in this case Review/Add/Change, tells you what you are currently doing: You are either reviewing your document, adding to it, or changing it. The Review/Add/Change title is replaced by something else when you execute a command. For example, when you are executing the Find command (OA-F), the title of the screen changes to read Find. The Review/Add/Change screen is where you do most of your work in the Word Processor.

In the upper right corner of the screen, you see the Escape destination. This tells you which screen will appear or what will happen when Escape is pressed and is always present when using the Word Processor. This handy feature will help you find your way around in the Word Processor.

On the second line of the screen you see the tab stop settings. These are dashed horizontal lines separated by vertical lines. These vertical lines indicate the actual tab stop locations that your cursor jumps forward or back to when you press Tab or OA-Tab, respectively. When you first start a Word Processor document, the tab stops are set to every five spaces. You can set tabs, clear tabs, or remove all tabs with the Tab Command (OA-T). The tab stop locations are saved with your document so that you don't need to set them every time you work on it.

The bottom line of the screen—the prompt line—contains three items of information. One is the prompt that tells you what to do at any given time. In this case it says "Type entry or use OA commands," telling you that it is all right to begin typing or to use the Open Apple commands. Watch this prompt carefully during the use of the Word Processor; it helps you whenever you get in a pinch and don't know what to do next.

The prompt line also specifies your cursor location. Right now it reads "Line 1 Column 1," the line and column your cursor is presently sitting on. (In the Word Processor, a column is one character wide.) The prompt line is also used to

display the value of an embedded print command, described in greater detail in a later section.

On the right end of the prompt line is the text "OA-? for Help," telling you that help is available by pressing the Open Apple key in conjunction with the question mark key. (You don't have to press Shift.) In the Word Processor, help is only available from the Review/Add/Change screen. Figure 3-7 shows what you see when you press OA-?.

Figure 3-7. Word Processor Help Screen

```
File: Memo                          HELP              Escape: Review/Add/Change
=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|===

                ⌂-C    Copy text (includes cut and paste)

                ⌂-D    Delete text

                ⌂-F    Find occurrences of....

                ⌂-K    Calculate page numbers

                ⌂-M    Move text (includes cut and paste)

                ⌂-N    Change name of file

                ⌂-O    Options for print formatting

                ⌂-P    Print

                ⌂-R    Replace occurrences of....

                ⌂-T    Set and clear tab stops

-----------------------------------------------------------------------------
Use arrows to see remainder of Help                          46K Avail.
```

Use the up-arrow (↑) and down-arrow (↓) keys to scroll through the list of available Word Processor commands. Notice that the available Desktop space is displayed on the prompt line of the Help screen.

Entering Text

Entering text in a word processor is a bit different than using a typewriter. The word-wraparound feature is one noteworthy distinction. When you approach the right margin as you type, *AppleWorks* determines where each line will end. If a word you're typing won't fit on the line, it is moved, or wrapped around, to the next line in your document, taking the cursor along with it. This whole process allows you to type without

the interruption of pressing Return at the end of every line. This feature redefines the use of the Return key. In *Apple-Works*, when you press the Return key, an actual character is added to your text just as if you had pressed any letter on the keyboard. You can't see Return characters unless you use the Zoom command (OA-Z), which causes them to show up on your screen as crosshatched boxes. (The Zoom command lets you see all other formatting options embedded in your text as well.) The Return character defines the end of a paragraph or blank line. When you finish a paragraph, press Return to start a new paragraph. All text preceding a Return character is considered part of the paragraph even if the paragraph is only one line long. To insert a blank line press the Return key to terminate the paragraph, and then press it again to enter the blank line. When you are typing one line of information such as a name or address on a business letter, press Return at the end of each line.

To enter text in the Word Processor all you have to do is move the cursor to the place where you want text to begin and type. The text is entered into your Word Processor document at the flashing cursor. Whenever you add to the middle of a document, the text to the right and below the cursor reformats itself and moves down uniformly. This aspect of the word wraparound feature facilitates comparatively effortless editing.

There are two types of input modes in the Word Processor: insert mode and overstrike mode. They are designated by the shape of the cursor. A flashing underline cursor indicates insert mode. In insert mode, whatever you type is inserted to the left of the cursor, and anything under the cursor or to its right is moved even further to the right.

In overstrike mode, the cursor is a flashing solid box. Overstrike mode allows you to replace any text you type over, unless you are at the end of a paragraph. In this case, it behaves as if you were in insert mode. Switch between the two modes by using the Edit command (OA-E).

Cursor Movement

There are a number of ways that you can move the cursor around in the Word Processor. The easiest is by pressing one of the four arrow keys. The up-arrow (↑), down-arrow (↓), left-arrow (←), and right-arrow (→) keys move the cursor up, down, left, and right, respectively.

Better yet, use the arrow keys in conjunction with the Open Apple (OA) key for faster cursor movement. OA-← or OA-→ moves the cursor to the beginning of the next word to the left or right; OA-↓ moves the cursor to the bottom line of the screen, and if already there, to the bottom of the next screen. (Each screen displays 20 lines.) OA-↑ works similarly, but in the opposite direction.

For cursor movement that is faster yet, use the Ruler feature which divides the file into eighths. Press OA-1 to move the cursor to the beginning of the document or OA-9 to move it to the end. Use OA-2 through OA-8 to move the cursor proportionally through the document.

Press Tab to move the cursor to the next tab stop indicated on the second line of the screen. Press OA-Tab to move the cursor to the previous tab stop. You can change tab settings with the Tab command (OA-T). When you press OA-T, you are presented with three options: S (to set a tab), C (to clear a tab), or R (to remove all tabs). To set or remove tabs, first move the cursor to the location you want before pressing the appropriate letter key.

Deleting Text

There are three ways to delete text in the Word Processor. When you make a typing error, press the Delete key to delete one character at a time to the left of the cursor. This key allows quick error correction during text input.

To delete blocks of text, printer options, and Return characters, use the Delete command (OA-D). (Printer options are special formatting settings that are embedded directly into the text. These are described more fully in a later section.) Press OA-D, and then highlight the text you want to delete by moving the cursor; press Return to initiate the deletion. If you want to delete printer options or Return characters, use the

Zoom command (OA-Z) to see where they are in your text.

The Clear command (OA-Y), a third deleting method, removes all text from the cursor to the end of the current line. There is no way to retrieve text that you delete using OA-Y, so be careful when using it.

Finding

The Word Processor features the Find command (OA-F) to search through your document for text (words, phrases, numbers, and so on), page breaks, markers, or printer options. You'll find yourself using this command more frequently as your document grows longer. In an instant it finds occurrences of anything you specify, a vast improvement over scrolling through the document yourself. Keep in mind when using this command that *Apple-Works* only searches forward in your document, so you need to place the cursor before the block of text that you want to search. To search from the beginning of your document, first press OA-1 to jump to the start of your text, and then press OA-F.

Replacing

The Replace command (OA-R) allows you to search for a word or phrase and replace it with another one. You can replace one occurrence at a time, verifying the replacement as you go, or you can replace all occurrences throughout the document all at once. For instance, should you discover a consistently misspelled a word or occurrences of poor word usage that you want to replace, using the Replace Command can be a real time-saver. Like the Find command, Replace only searches forward through your document, so be sure to place the cursor before the text that you want to search through.

Moving and Copying

Moving and copying is one of the most valuable features of word processing. You can move or copy large portions of text from one place to another in a matter of seconds. For those who end up rearranging large parts of their document, the Move (OA-M) and the Copy (OA-C) commands are a boon. The two commands operate very similarly: Move actually deletes the text

from one place and puts it somewhere else, while Copy leaves the text in place while putting a copy of it elsewhere.

AppleWorks allows you to move and copy text within a single document. You can also move or copy text to or from the Clipboard. The Clipboard, like its literal counterpart, is a place where you temporarily store a piece of your document before you put it somewhere else. More details on moving and copying text between documents are given elsewhere in this chapter.

If you are moving or copying text within your document, you must first highlight the text that you want to move or copy with the cursor movement commands, and then designate the new spot in which you want the text to be placed. You can move or copy anything that can be highlighted (up to 250 lines): words, phrases, sentences, paragraphs, Return characters, printer options, and even whole documents.

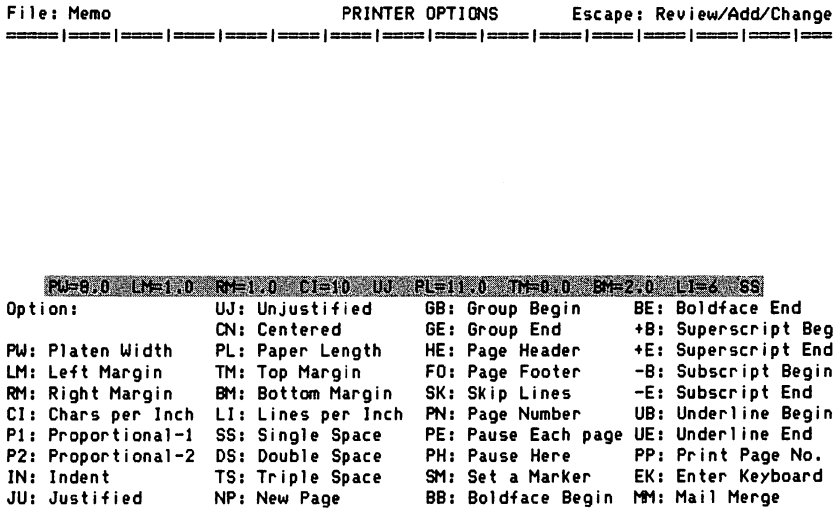## Formatting with Printer Options

Printer options are settings that you actually embed in your document to control the way it is printed. These options control vertical and horizontal spacing, indention, justification, pagination, and style of text. The Word Processor already has standard, or default, format settings that it uses when printing a document. If you want to change any of these standard settings or want to add some extra formatting or printer control, you must embed printer options into your actual text. The printer options are available from the Printer Options menu.

When you press OA-O the Printer Options menu opens up onto the lower part of your screen.

There are 38 different printer options on this menu, each with its own unique two-letter code. For example, PW is the code for Platen Width, and SS is the code for Single Space. They are are all described at the end of this section.

The highlighted line at the top of the menu displays the current settings for platen width, left margin, right margin, characters per inch, justification, paper length, top margin, bottom margin, lines per inch, and line spacing.

Figure 3-8. Printer Options Menu

```
File: Memo                    PRINTER OPTIONS        Escape: Review/Add/Change
===== |==== |==== |==== |==== |==== |==== |==== |==== |==== |==== |==== |==== |==== |==== |===
```

```
PW=8.0  LM=1.0  RM=1.0  CI=10  UJ  PL=11.0  TM=0.0  BM=2.0  LI=6  SS
Option:              UJ: Unjustified    GB: Group Begin      BE: Boldface End
                     CN: Centered       GE: Group End        +B: Superscript Beg
PW: Platen Width     PL: Paper Length   HE: Page Header      +E: Superscript End
LM: Left Margin      TM: Top Margin     FO: Page Footer      -B: Subscript Begin
RM: Right Margin     BM: Bottom Margin  SK: Skip Lines       -E: Subscript End
CI: Chars per Inch   LI: Lines per Inch PN: Page Number      UB: Underline Begin
P1: Proportional-1   SS: Single Space   PE: Pause Each page  UE: Underline End
P2: Proportional-2   DS: Double Space   PH: Pause Here       PP: Print Page No.
IN: Indent           TS: Triple Space   SM: Set a Marker     EK: Enter Keyboard
JU: Justified        NP: New Page       BB: Boldface Begin   MM: Mail Merge
```

Setting the Printer Options

- To embed one of the printer options in your document, place the cursor where you want the formatting or printer control to begin and press OA-O. If you want the formatting to affect the whole document, place the cursor at the beginning of the document before pressing OA-O.

- The Printer Options menu appears in the lower half of your screen, and the cursor flashes next to the *Option:* prompt. Type the two-letter code of the option that you want and press Return.

- Some options may also require you to enter additional information. For instance, in order to complete the Left Margin (LM) setting, you need to specify the number of inches wide you'd like that margin to be. Enter this extra information, if necessary, and press Return.

Printer options embedded in your document are displayed in either of two ways. A printer option that will affect whole paragraphs appears within your text on a line by itself. It is designated by eight dashes, followed by the name of the option and any other pertinent information, such as the width of a margin. Printer options that will affect less than a whole paragraph are shown by an inconspicuous caret character (^).

Even though printer option instructions seem to have displaced your text on the screen, they will not appear in the version your printer produces.

Figure 3-9. Printer Options Screen Showing an Embedded Command

```
File: Memo                      PRINTER OPTIONS        Escape: Review/Add/Change
=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|=====|===
--------Left Margin:  2.0 inches
```

```
        PW=8.0  LM=2.0  RM=1.0  CI=10  UJ  PL=11.0  TM=0.0  BM=2.0  LI=6  SS
Option:                 UJ: Unjustified      GB: Group Begin      BE: Boldface End
                        CN: Centered         GE: Group End        +B: Superscript Beg
PW: Platen Width        PL: Paper Length     HE: Page Header      +E: Superscript End
LM: Left Margin         TM: Top Margin       FO: Page Footer      -B: Subscript Begin
RM: Right Margin        BM: Bottom Margin    SK: Skip Lines       -E: Subscript End
CI: Chars per Inch      LI: Lines per Inch   PN: Page Number      UB: Underline Begin
P1: Proportional-1      SS: Single Space     PE: Pause Each page  UE: Underline End
P2: Proportional-2      DS: Double Space     PH: Pause Here       PP: Print Page No.
IN: Indent              TS: Triple Space     SM: Set a Marker     EK: Enter Keyboard
JU: Justified           NP: New Page         BB: Boldface Begin   MM: Mail Merge
```

Zooming

You may continue to embed more options at this point, or press Escape to return to the Review/Add/Change screen. Each time you open the Printer Options menu, all previously entered printer option lines and carets appear in the visible part of the document above the menu. You can see embedded printer options and Return characters on the Review/Add/Change screen only if the Zoom command (OA-Z) is used. You may "Zoom In" and "Zoom Out" whenever you like while working on the Review/Add/Change screen. Some options may appear cryptic at this point, however, since they ap-

pear as mere carets interspersed throughout your text. To zero in further on the meaning behind these tiny indicators, place the cursor on the caret in question and look at the prompt line where a message disclosing the type of printer option that the caret represents appears.

Notice that only those printer options that are embedded are displayed when you zoom in on your text. Unchanged standard values are not displayed, but appear on the top line of the Printer Options menu.

Figure 3-10. Screen Showing Printer Options Message in the Command Line

```
File: Memo              REVIEW/ADD/CHANGE           Escape: Main Menu
=====|====|====|====|====|====|====|====|====|====|====|====|====|===

--------Centered
                   MEMO
--------Unjustified

TO: Steve Jacobs
FROM: Bill Fry

RE: The new hours

We will be opening the office at 6:00 AM starting
tomorrow 6/5/87. ▓Be here bright and early.`

Please relay this news to those that work for you,
and be firm. We need to cut back on tardiness!

See you tomorrow.



----------------------------------------------------------------------
Type entry or use ᘓ commands      Boldface Begin        ᘓ-? for Help
```

Printer Option List

Following is a list of all of the printer options and their uses. It is arranged in the same order as the list found on the Printer Options menu and is divided into eight categories: Horizontal Spacing, Indention, Justification, Vertical Spacing, Pagination, Printer Control, Text Style, and Special. The last two groups include those options that are indicated by caret characters in your text. See the table at the end of this section for a summary of standard printer option settings, which shows the minimum and maximum allowable values for each.

Unless otherwise stated, printer options embedded in your text affect all subsequent text throughout your document. You

can embed an option later on in the text to nullify the original option if you want the feature to affect only a portion of your document. Some options will turn off automatically at the end of a paragraph; others, at the end of a line. Individual differences in this regard are noted.

Remember that you can always delete printer options using the Delete command (OA-D).

Horizontal Spacing
PW Platen Width

The distance that the printer head can travel from left to right. It is normally eight inches unless you have a wide-carriage printer, in which case it will be more. You can change this option if you are using smaller paper than normal. *AppleWorks* uses this width when it calculates how many characters can fit on one line. If you need to set Platen Width, do it at the beginning of your document.

LM Left Margin

The margin width that *AppleWorks* leaves on the left side of your paper. It is set to the nearest .10 inch. You can use this option to make indented lists, quotes, or paragraphs.

RM Right Margin

The number of inches of margin that *AppleWorks* leaves on the right side of your paper. It is set to the nearest .10 inch.

CI Chars per Inch

The number of characters printed in each inch of text. The higher this number is, the greater the number of characters that will fit on one line. Most printers are limited in the number of possible characters-per-inch settings offered. Consult your printer manual for these exact parameters. If you use settings that your printer is not equipped to print in, *AppleWorks* reverts to any previously set CI option in the document. The Characters per Inch option is nullified in a document if you turn on the Proportional Printing (P1 or P2) option.

P1 Proportional-1

This tells your printer to change to the first of two possible alternate fonts available with most printers. Proportional fonts produce text spacing that appears less like a typewriter-quality font and more like typeset, letter-quality text. Unless you turn on proportional printing, most printers will space each character the same distance apart—regardless of whether it's a wider letter like an *m* or a narrower one like an *l*. This setting works with the following printers: Apple Dot Matrix, ImageWriter, ImageWriter II, and Daisy Wheel; Epson FX series; and Qume Sprint 5 and Sprint 11. Don't use this setting if you have set up your printer as a custom printer. This setting will affect all subsequent text in a document until a Proportional-2 setting is entered, or until you change the Characters per Inch setting.

P2 Proportional-2

This tells your printer to start using its second proportional font. Proportional fonts allow varied character-width spacing (see P1 above). Use this setting with the following printers: Apple Dot Matrix, ImageWriter, and ImageWriter II; Epson FX series; and Qume Sprint 5 and Sprint 11. Don't use this setting if you have set up your printer as a custom printer. This setting will stay in effect until you change to Proportional-1, or until you change the Characters per Inch setting.

Indention

IN Indent

This option indents every line of a paragraph, except the first line, by a specified number of characters. These types of paragraphs are called hanging paragraphs. Remember that a paragraph is defined in *AppleWorks* as any text that ends with a Return character. To turn off the hanging paragraphs feature, set Indent to zero characters.

Justification

JU Justified

Setting the justification option causes all text in a document to be aligned flush with the left and right margin

when it is printed. Justifying gives your document a uni-
form look, such as that found in newspaper columns. This
setting affects all subsequent text unless an Unjustified or
Centered option is entered later in the text.

UJ Unjustified
Unjustified text (*AppleWorks* standard justification) prints
out with an aligned left margin, and an uneven, or ragged,
right margin. Use this setting to nullify previously set Justi-
fied or Centered options.

CN Centered
This setting will center text between the left and right mar-
gins. Use this option, for example, to center titles in your
document. This setting affects all subsequent text until a
Justified or Unjustified option is entered later in the
document.

Vertical Spacing
PL Paper Length
This setting tells *AppleWorks* the length of one sheet of your
paper. Normal computer paper is 11 inches long, but if you
are printing on special forms or mailing labels that are not 11
inches long, you need to set Paper Length. It is set to the
nearest .10 inch. *AppleWorks* uses this value to calculate page
breaks, the place where one page ends and the next begins.
If you set this value to anything other than 11 inches, you
need to set up your printer so that it does not recognize top-
of-page commands; otherwise, your printer will form feed to
the top of what it thinks is an 11-inch page. See "How to
Sett Up Your Printer" in this chapter for more information on
top-of-page commands.

TM Top Margin
The number of inches that *AppleWorks* leaves blank on the
top of your paper. It is set to the nearest .10 inch.

BM Bottom Margin
The number of inches that *AppleWorks* leaves blank on the
bottom of your paper. It is set to the nearest .10 inch.

LI Lines per Inch

This sets the number of lines that fit within one vertical inch of your paper. It can be set to either 6 (standard) or 8 (condensed).

SS Single Space

This sets the line spacing in a document so that there are no blank lines between each printed line. This option affects all subsequent text until settings for Double or Triple Space options are entered in the document.

DS Double Space

This sets the line spacing in a document so that there is one blank line between each printed line. This option affects all subsequent text until settings for Single or Triple Space options are entered.

TS Triple Space

This sets the line spacing in a document so that there are two blank lines between each printed line. This option affects all subsequent text unless options for single- or double-spacing are embedded in the document.

Pagination
NP New Page

Use this option to force a page break while printing. (A page break is where one page ends and another begins.) Set this option before the line that you want to appear on the new page. *AppleWorks* only allows you to set a New Page option at the beginning of a paragraph. Use the Calculate command (OA-K) to see where page breaks occur in your document. The Calculate command lets you see how *AppleWorks* will accommodate your document to the specific printer you are using. At the same time, it indicates the number of pages in your document. See the command summary in Chapter 4 for more on OA-K.

GB Group Begin

This option is used in conjunction with Group End (GE). It sets the beginning of a block, or group, of text that you

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want on the same page. When *AppleWorks* sees a Group Begin option it will scan forward in your text until it finds the matching Group End option; if the block of text, defined by GB and GE, will not fit on the current page, it will jump to the beginning of the next page before printing the text. Use these options to guarantee that designated text appears together on the same page, such as a worksheet "pasted" into your document from the Spreadsheet.

GE Group End
   This option is used in conjunction with Group Begin (GB). It sets the ending of a block, or group, of text that you want all on the same page. (See the entry for Group Begin.)

HE Page Header
   Using this option, you can print one line of text as a header at the beginning of every page below the top margin. This is useful should you want a title, page numbers, or any other information printed on the top of every page of your document. This option interprets the very next line after the Page Header option as the text for the header. The best way to establish a header is to first set the option, and then Escape back to the Review/Add/Change screen, position the cursor on the line after the Page Header option, and type the desired text. When *AppleWorks* encounters this option while printing, it begins printing the header on the very next page. To have the header printed on the first page of your document, be sure that you set the Page Header option at the beginning of your document, before any text. To turn off your page header at any point within the same document, enter the option again and leave a blank line after it. To include page numbers in a header, use the Print Page Number (PP) option. See also the description of the Page Number (PN) option for details on starting pagination with any number other than 1.

FO Page Footer
   Using this option, you can print one line of text as a footer at the end of every page above the bottom margin. Use

this option to print a title, page numbers, or any other information on the bottom of every page of your document. This option interprets the very next line after the Page Footer option as the footer text. The best way to establish a footer is to first set the option, Escape back to the Review/Add/Change screen, position the cursor on the line after the Page Footer option, and type the text that you want to appear in the footer. When *AppleWorks* encounters this option while printing, it begins printing the footer on that page. To turn off your page footer in the middle of a document, enter the option again and leave a blank line after it.

SK Skip Lines

Use this option to have *AppleWorks* skip a number of lines when printing. This option is useful when you want to paste in an illustration in your document after it is printed. Place this option on the line preceding the first skipped line.

PN Page Number

This option allows you to change the page number that would normally be assigned to a page and to continue counting from the new number. (When you initially embed a Print Page Number command, *AppleWorks* assumes you want to begin with page 1 and automatically calculates each consecutive page number as it is printing. See PP, Print Page Number.) For example, if you set the Page Number option to 5 at the beginning of a two-page paper, it would print the page numbers as 5 and 6. This option is helpful when you want to compile a number of different files into one unified document with continuous page numbers. To change pagination on a certain page in the middle of a document with existing pagination, set the option anywhere on the previous page, as long as it's before the page break. If you want the new page number to take effect on the first page of your document, set the option at the very beginning of your document before any text. This option is only relevant if you have previously embedded

the Print Page Number (PP) option. You can also see how many pages your document contains when you check page breaks with the Calculate command (OA-K). (See HE, Page Header, for more on the Calculate Command.)

Printer Control
PE Pause Each Page

Set this option at the beginning of your document if you want to print out on single sheets of paper. After each page is printed, *AppleWorks* will pause and wait for you to press the space bar to continue printing.

PH Pause Here

Set this option anywhere in your document that you want printing to pause. You can use this option in conjunction with the Escape key to print only a portion of your document.

SM Set a Marker

Although this option does not have anything to do with printing, it is executed from the printer option menu. It allows you to set numbered markers in your document to signal places that you need to return to often. Once a marker is set, it can be searched for using the Find command (OA-F).

Text Style
BB Boldface Begin

Use this option to turn on boldface printing at the position of the cursor. The boldface text continues from where the caret character appears to the next Boldface End option or to the end of the paragraph, whichever comes first. Remember that even though the caret seems to have displaced your text on the screen, it will not appear in the version your printer produces. You can also type Control-B at the Review/Add/Change screen to activate boldface text. This shortcut allows you to avoid using the Printer Options menu.

BE Boldface End

Use this option to turn off boldfacing at the position of the cursor. You can also type Control-B at the Review/Add/Change screen to turn off boldfacing, provided that there is a Boldface Begin option embedded previously in the same paragraph. This shortcut allows you to avoid using the Printer Options menu.

+B Superscript Begin

Use this option to turn on superscript printing at the position of the cursor. The text after the option is printed slightly above the normal line and continues in this way until it encounters a Superscript End or the end of the line. Use superscript printing for footnote numbers or in mathematical text, such as fractions and formulas.

+E Superscript End

Use this option to turn off superscript printing at the position of the cursor.

−B Subscript Begin

Use this option to turn on subscript printing at the position of the cursor. The text after the option is printed slightly below the normal line and continues in this way until it encounters a Subscript End or the end of the line. Use subscript for footnote numbers or in mathematical text, such as fractions and formulas.

−E Subscript End

Use this option to turn off subscript printing at the position of the cursor.

UB Underline Begin

Use this option to turn on underlining at the position of the cursor. The underlined text will continue from the caret character to the next Underline End option or to the end of the paragraph, whichever comes first. You can also type Control-L at the Review/Add/Change screen to turn on underlining. This shortcut allows you to avoid using the Printer Options menu.

UE Underline End

Use this option to turn off underlining at the position of the cursor. Control-L can also be used in the Review/Add/Change screen to turn off underlining, provided that there is an Underline Begin option embedded previously in the same paragraph.

PP Print Page Number

Use this option to print a single page number at any specified cursor location on a page. For example, if you set this option on page 6 of your document, it will automatically print that page number—6, in this case. But if you want to have page numbers appear on every page without manually embedding a new PP option on each page, you must set up a Page Header (HE) or Page Footer (FO) and put the Print Page Number option in the header or footer text line. The Print Page Number appears as a caret character in your text.

Special

EK Enter Keyboard

This option allows you to stop printing so that you can print text that you type in directly from the keyboard. When *AppleWorks* encounters this option, it stops printing and prompts you to type (up to 50 characters). It then prints the information and continues to print the rest of the document. You can use this option to enter variable information such as names or dates into a form letter that you use repeatedly.

MM Mail Merge

This option is only available in *AppleWorks* versions 2.0 or later. It allows you to customize your document to use data from categories in a database. See "Using the Clipboard for Integration" in this chapter for a full discussion of Mail Merge.

Printing

AppleWorks allows you to print your document either to a printer or to disk as a text (ASCII) file. You may want to print

to a disk if you will use the file in a program other than *AppleWorks* or for telecommunications.

To print your document at any time, use the Print command (OA-P). The Print command asks you to specify three pieces of information: the location at which printing should start (at the beginning of the document, at the current page, or at the cursor), the print destination (printer or disk), and how many copies you want (1–9). If you have Mail Merge printer options embedded in your text (only *AppleWorks* version 2.0 or later), it will also ask you whether you want to merge the data during the print. You can pause the printing process by pressing the space bar or you can terminate the printing altogether using Escape to return to the Review/Add/Change screen. If you pause printing with the space bar, press it again to continue.

Saving

You can save your document at any time from the Word Processor with the Save command (OA-S). *AppleWorks* saves your document onto the current disk with the same filename as the one noted at the top of the screen. Any Word Processor file with the same name is replaced without further verification. Be sure you want to replace any existing file with that name before executing the Save command. During the saving process, *AppleWorks* gives you one last chance to change your mind. For a few seconds during the beginning of the save you can press Escape to cancel the save and return to Review/ Add/Change. Remember, you only have a few seconds to cancel, so think before you execute the Save command.

You may also save your Word Processor file from the Main Menu by choosing either 3, Save Desktop files to disk, or 6, Quit. It is probably safer to save your file from the Main Menu: It requires you to verify that you want the file to replace any existing file on disk with that name.

Saving is important. Power failures, glitches, human error, or even program error can cause you to lose valuable, unsaved data. It is best to save your files frequently.

Printer Command Summary

Code	Command	Standard	Minimum	Maximum
Horizontal Spacing				
PW	Platen Width	8.0 inches	0.1 inches	13.2 inches
LM	Left Margin	1.0 inch	0 inches	9 inches
RM	Right Margin	1.0 inch	0 inches	9 inches
CI	Chars per Inch	10	4	24
P1	Proportional-1	Off		
P2	Proportional-2	Off		
Indention				
IN	Indent	0	0	99
Justification				
JU	Justified	Off		
UJ	Unjustified	On		
CN	Centered	Off		
Vertical Spacing				
PL	Paper Length	11 inches	0.1 inches	25.4 inches
TM	Top Margin	0 inches	0 inches	9 inches
BM	Bottom Margin	2 inches	0 inches	9 inches
LI	Lines per Inch	6	6	8
SS	Single Space	On		
DS	Double Space	Off		
TS	Triple Space	Off		
Pagination				
NP	New Page	None		
GB	Group Begin	None		
GE	Group End	None		
HE	Page Header	None		
FO	Page Footer	None		
SK	Skip Lines	0	0	90
PN	Page Number	1	1	511
Printer Control				
PE	Pause Each Page	Off		
PH	Pause Here	None		
SM	Set a Marker	None	0	254
Text Style				
BB	Boldface Begin	None		
BE	Boldface End	None		
+B	Superscript Begin	None		
+E	Superscript End	None		

Code	Command	Standard	Minimum	Maximum
−B	Subscript Begin	None		
−E	Subscript End	None		
UB	Underline Begin	None		
UE	Underline End	None		
PP	Print Page Number	None		
Special				
EK	Enter Keyboard	Off		
MM	Mail Merge	Off		

Using the Data Base

You can begin work in the Data Base either by creating a new file from scratch or by loading an already existing file from a list of disk files. See the section on using the Desktop at the beginning of this chapter for more on these procedures. This section describes each Data Base feature and command and includes a detailed explanation of how to print reports from the Data Base. Refer to the Command Summary, Chapter 4, if you need additional help with particular Data Base commands.

Creating a New Data Base File

If you are creating a Data Base file from scratch, the first screen to appear is titled Change Name/Category.

You define your database on this screen. A database is used to collect and store a group of similar items. These items, termed *records*, could be names and addresses, personnel records, inventory items, or any other type of information presently stored on lists, cards, or forms. Every record is comprised of a number of categories. For example, each record in an address list may have individual categories for first name, last name, street address, city, state, and zip code.

When you first define your database, spend some time thinking about the individual categories that you may need. Keep in mind that it is better to define as few items of data as possible in each category. For example, you may want to arrange an address list in alphabetical order by last name. If you have defined your database with the first and the last name in one category, you can't alphabetize by last name unless you

Figure 3-11. Change Name/Category Screen

```
File: Class List              CHANGE NAME/CATEGORY      Escape: Review/Add/Change


Category names
Category 1                              |
                                        | Options:
                                        |
                                        | Change category name
                                        | Up arrow    Go to filename
                                        | Down arrow Go to next category
                                        | ∂-I        Insert new category
                                        |
                                        |
                                        |
                                        |
                                        |
                                        |
Type entry or use ⟁ commands                              45K Avail.
```

typed the last name first. It is better to have an individual cat-
egory for both first name and last name instead of one cate-
gory that holds both.

As it is with any *AppleWorks* screen, on the top of the
Change Name/Category screen you will see the filename, the
title, and the Escape destination. Use the left half of the di-
vided screen to define the categories of your database. The
right half shows you the active command options to use.
AppleWorks suggests Category 1 as the name for the first cate-
gory, but you'll probably want to change it. In the left box,
you can enter as many as 30 different categories.

How to Enter Category Names

Enter the category names as you would any normal input on
the prompt line, using the arrow keys to move around in the
entry, Delete to delete one character, OA-Y* to clear the cate-
gory name, OA-E to switch between insert and overstrike
cursor, Escape to restore any previous entry, and Return to ac-

---

* Open Apple Commands, which require you to press the Open Apple key and some other key simulta-
neously, are indicated in this book with the letters OA.

cept the input. Watch the top line for details. Sometimes Escape takes you where you don't want to go.

As you enter the categories, they fill the box on the left. If you want one of your categories to be a date or a time, be sure that you use the word *date* or *time* in the category name. *AppleWorks* converts all date and time entries to a standard format. That is, when you type in 12/25/87 it becomes Dec 25 87. Enter 7pm or 19:00 in a time category, and it becomes 7:00 PM. You are able to enter partial date entries, like 12/87, but it is suggested that you enter full dates.

If you change your mind about a category name and want to alter it, use the up- and down-arrow keys to put the cursor on the entry, and then edit it as you wish. To delete an entire entry, put the cursor on the category name and press OA-D. To insert a category name between two other category names, place the cursor in the desired location and press OA-I. A dash indicates the place for the new category name.

How to Change a Filename

Another Change Name/Category feature lets you change the filename. Press the up arrow until you are on the first category, then press it once more to jump to the prompt line where the filename is displayed. Change the Data Base filename as you desire by using the standard edit procedures mentioned above, but don't press Escape. Instead of restoring a previous entry, here Escape takes you to Insert New Records. To return the cursor to the category names, press Return or the down arrow.

When you have defined all of the categories that you want to include in each record of your database, press Escape. *AppleWorks* displays a message telling you that there is no information in your file and that you will automatically go into the Insert New Records feature. Press the space bar to acknowledge the message, and *AppleWorks* will take you to the Insert New Records screen.

Figure 3-12. Insert New Records Screen

```
File: Class List          INSERT NEW RECORDS     Escape: Review/Add/Change


Record 1 of 1
==================================================================================
First Name: -
Nickname: -
Last Name: -
Address: -
City/State: -
Zip Code: -
Phone Number: -
Father's Name: -
Mother's Name: -
Gender: -
ID Number: -
Emergency Phone: -
Reading Level: -
Math Level: -


-----------------------------------------------------------------------------
Type entry or use Ⓒ commands                                    45K Avail.
```

Entering and Changing Information in New Records

It is at the Insert New Records screen that you enter actual data for each record in your database. One blank record is displayed on the screen with the cursor flashing next to the first category. The numbers above the dashed line designate which of your many records you are working on. Enter data for each category, pressing Return after each entry. If you want to leave an entry blank, just press Return. When you press Return for the last category of your record, the record is stored and the next blank record appears. This way, you can enter as many records as you like.

Single- and Multiple-Record Layouts

To view completed records, press Escape. The title changes to Review/Add/Change, and the first record that you entered appears. This type of screen layout, where you see only one of your records at a time, is called the *single-record layout.*

You can also view your records in a different way. Press OA-Z to Zoom to the *multiple-record layout,* which shows many of your records at once. Each record is on a line of its

own, and the categories are arranged in columns. Note that
AppleWorks puts a dash in any entry that is blank.

Figure 3-13. Single-Record Layout

```
File: Class List            REVIEW/ADD/CHANGE          Escape: Main Menu

Selection: All records


Record 1 of 25
=============================================================================
First Name: William
Nickname: Bill
Last Name: Anderson
Address: 4687 Treecrest Dr
City/State: Solona Beach, CA
Zip Code: 92078
Phone Number: 998-1847
Father's Name: William
Mother's Name: Rose
Gender: Male
ID Number: 24893
Reading Level: 1
Math Level: 1

------------------------------------------------------------------------------
Type entry or use Ċ commands                              Ċ-? for Help
```

Figure 3-14. Multiple-Record Layout

```
File: Class List            REVIEW/ADD/CHANGE          Escape: Main Menu

Selection: All records


First Name     Nickname     Last Name     Address         City/State
==============================================================================
William        Bill         Anderson      4687 Treecrest  Solona Beach, C
James          Jim          Burns         817 W Grand     Encinitas, CA
Cheryl         -            Cavanaugh     943 Concord     Encinitas, CA
Benjamin       Ben          Sonada        114 Midway Driv Solona Beach, C
Rachelle       -            Edwards       710 S Pacific   Del Mar, CA
Tim            -            Gibbs         13062 Edina Way  Solona Beach, C
Janet          Jan          Norris        1342 Magnolia   Solona Beach, C
Susan          Sue          Packer        915 Brookfield  Encinitas, CA
Elizabeth      Beth         Vilay         2551 Mission    Encinitas, CA
Nancy          -            Northrup      3442 Woodwind    Encinitas, CA
Joan           -            Schmidt       9943 Muffin Ct  Encinitas, CA
Andrea         -            Bernal        648 W. Californ Encinitas, CA
Rosa           -            De Lar        34 Crest Dr     Encinitas, CA
Blair          -            Green         1500 Brooktree  Encinitas, CA
Paul           -            Gray          3218 Valley     Encinitas, CA
------------------------------------------------------------------------------
Type entry or use Ċ commands                              Ċ-? for Help
```

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One drawback to the multiple-record layout is that, since the screen is only 80 characters wide, you can only see five category columns of 15 characters each. If you have over five categories or more than 15 characters per entry, the excess will be off the screen to the right, just out of view. You can see them by switching back to single-record layout using Zoom (OA-Z).

The words *Selection: All records* on the third line of a single-record layout tell you that all of the records are selected for viewing. Later you will use the Record Selection command, OA-R, to change the selection of records.

You will soon become familiar with the two different layouts as you work with *AppleWorks*. Later you will learn how to rearrange these layouts to meet your evolving needs.

How to Enter Data: Cursor Movement

At the Review/Add/Change screen, in either layout, *AppleWorks* allows you to enter the contents of each category and edit it. Place the cursor on the desired category using Tab to move to the right and OA-Tab to move left. Use the standard edit functions of *AppleWorks* (left arrow, right arrow, Delete, OA-Y, OA-E, and Return) to edit text.

If the cursor is on the last category of a record, pressing Tab moves it to the first category of the next record. If it is on the first category of a record, pressing OA-Tab moves it to the last category of the previous record. By the way, the up arrow and down arrow work the same as Tab and OA-Tab in single-record layout.

Cursor movement is fairly consistent throughout *AppleWorks*. It will seem more so as you become familiar with the program; however, be sure to note the differences in cursor movement between the two different layouts.

Use the arrow keys to move the cursor one character left or right within a single entry. Be sure to press Return when you have completed an entry; otherwise *AppleWorks* beeps when you press down arrow or Tab.

Generally, after you press the Return key, the cursor plots a course downward on the screen, moving from row to row. Use the Layout command (OA-L) to change its direction to the

right, moving from category to category (multiple-record format only).

There are two ways to move around quickly in the Data
Base: by using the OA-arrow commands or by using the ruler.

The arrow keys function differently in each layout. In
single-record layout, OA-↓ moves the cursor to the same category of the next record. OA-↑ moves it to the same category of
the previous record. In multiple-record layout, OA-↓ moves
the cursor to the same category at the bottom of the screen; or,
if it is already at the bottom, it moves the cursor to the bottom
of the next screen of records. Similarly, OA-↑ moves the
cursor to the same category at the top of the screen or to the
top of the previous screen.

Like in the Word Processor, the Ruler divides the file into
eight equal parts, thus allowing you to use the Ruler Commands (OA-1 through OA-9) to move quickly through the file.
OA-1 takes you to the beginning, OA-9 takes you to the end,
and OA-2 through OA-8 take you to the other Ruler points
accordingly.

How to Insert Records

Once you have created a database and are at the Review/
Add/Change screen, there are two ways to insert new records.

In single-record layout, insert records at the end of the file
by moving the cursor to the last record of the file (OA-9) and
pressing Tab until the cursor passes the last category. *Apple
Works* tells you that you have gone past the last record and allows you to start typing new records there.

In both single- and multiple-record layout, you can also
insert records between existing records by using the Insert
command (OA-I). *AppleWorks* takes you directly to the Insert
New Records screen and allows you to insert new records at
the position where the cursor was located when you pressed
OA-I.

To make inserting new information easier, use the Value
command (OA-V) and the Ditto command (OA-"). The Value
command (OA-V) allows you to set standard values for any or
all of your categories. You can save time by using this command if you know that most of your entries for a particular

category will be the same. After setting a standard value, when-
ever you insert a new record, the standard value is already
typed in. To set up a standard value in a record, press OA-V
while at the Add/Review/Change or Insert New Records
screens. A single-record layout of your record is displayed
with the cursor on the first category. Use the arrow keys to
place the cursor on the desired category. To turn off a stan-
dard value, simply blank out the entry (OA-Y).

The Ditto Command (OA-") allows you to copy the entry
above the cursor into the current cursor location. This com-
mand only works in multiple-record layout.

Changing the Layout

If you are not satisfied with the way the single- or multiple-
record layout looks on the screen, you can change it using the
Layout command (OA-L).

In multiple-record layout, OA-L takes you to the Change
Record Layout screen.

Figure 3-15. Change Record Layout

```
File: Class List          CHANGE RECORD LAYOUT     Escape: Review/Add/Change

======================================================================

                    --> or <--  Move cursor
                     >  Ć  <    Switch category positions
                    --> Ć <--   Change column width
                     Ć-D        Delete this category
                     Ć-I        Insert a previously deleted category

------------------------------------------------------------------

First Name      Nickname        Last Name       Address         City/State
--------------  --------------  --------------  --------------  --------------
William         Bill            Anderson        4687 Treecrest  Solona Beach, C
James           Jim             Burns           817 W Grand     Encinitas, CA
Cheryl                          Cavanaugh       943 Concord     Encinitas, CA
----------------------------------------------------------------- More --->
Use options shown above to change record layout              43K Avail.
```

60

The Change Record Layout screen for the multiple-record layout shows both a few of the records in their present format and a list of the active commands available to rearrange the layout. To execute one of the commands, be sure the cursor is on the category that you want the command to operate on. Move through the categories using the arrow keys. There may be categories off the screen to the right. Scroll to these categories using the right arrow. The commands allow you to switch category positions (OA-< and OA->), to change the column width of any category (OA-← and OA-→), to delete categories from the layout (OA-D), and to reinsert previously deleted categories (OA-I). Whenever you delete categories from the layout, the data is not lost—it just doesn't show up on the layout.

Changing the layout for a single-record layout is a little different. The only thing you may change is the location of the categories on the screen. Rearranging your layout may be helpful to ease data input. You may change your layout to match most paper forms that you might be inputting data from, or to group similar categories together. To change the layout, first be sure you are in single-record layout, and then press OA-L. Move a category around in the layout by placing the cursor on the first character of the category. Then use OA-←, OA-→, OA-↑, and OA-↓ to move the category around on the screen.

Adding, Deleting, and Changing Categories Permanently

After a while you may find that you need additional categories, that you could do with fewer, or that you just don't like the names of some. To resolve any of these problems, use the Change Name/Category command (OA-N). Pressing OA-N takes you to the Change Name/Category screen. This screen should be familiar to you since it was here that you originally set up your database. On this screen you can insert (OA-I) or delete (OA-D) categories, and you can change the name of any or all categories. Be careful not to delete any important categories, or you will lose all of the data associated with

them. Another caution: When permanently changing your database, you will lose any special screen layouts (from the Layout command OA-L) or report formats (more on these later) if you insert or delete any categories.

Deleting Records

You can delete whole records easily by using the Delete command (OA-D). In single-record layout, OA-D allows you to delete the current record and any succeeding records, one at a time, verifying the deletion as you go. To delete many records at once, be sure that you are in multiple-record layout, place the cursor on the record you desire, and press OA-D. You may now highlight as many records as you like by using the cursor movement commands. After you have selected the records for deletion by highlighting them, press Return to delete them.

Moving and Copying Records

AppleWorks allows you to move (OA-M) or copy (OA-C) one or more records to or from the Clipboard, and it allows you to make up to 99 copies of a single record (OA-C). Remember that moving is different than copying in that when you move a group of records you are actually deleting them from one place and then inserting them somewhere else. Copying only lifts a copy of your records to take somewhere else, leaving the original behind.

You can use the Clipboard either to move or copy records within a Data Base file or to move or copy records to or from another Data Base file. (To integrate records into Word Processor or Spreadsheet files, print commands are used instead of move and copy commands.) To move or copy records within your Data Base file, first be sure you are in multiple-record layout. Press OA-M to move or OA-C to copy, and select To Clipboard from the prompt line. Then highlight the desired records and press Return. Now the records are on the Clipboard. Place the cursor in the Data Base file where you want to relocate the records, press OA-M or OA-C again, choose From Clipboard, and the records that were on the Clipboard are moved or copied to that location. To move or copy records

between Data Base files, see the section on using the Clip-
board for integration later in this chapter.

To make multiple copies of a single record within a file,
place the cursor on the record that you want to copy and press
OA-C. (If you are in multiple-record layout, verify your record
choice by selecting Current record from the prompt line.) You
may now enter the number of copies you want of the record.
After pressing Return, exact copies of the record are added to
your Data Base file.

Selecting and Arranging Records

Selecting and arranging records is where the real power of the
Data Base lies. Using OA-R and OA-A, you can set up rules or
criteria that the records must meet. Then you can arrange
these records in any order you want. In addition, you can ana-
lyze your database to determine trends in your data or to pin-
point groups of information.

For instance, a database that tracks customers by their zip
code and sales amounts could be developed into a canvassing
tool targeted at volume customers living in a particular area.
Once you've selected your records, you can arrange them by
sales amounts from highest to lowest to see who to call on
first. Arranging is also handy if you want to alphabetize your
list.

On the third line of the Add/Review/Change screen, you
see the current selection criteria. The default selection criteria,
All records, means that all of your records are currently se-
lected; that is, as you scroll through them, you see every one.
You can have up to three rules of selection separated by the
logical operators *and* or *or*. You can also set up a range of val-
ues for a single category as a rule using the *through* operator.
To define your first selection rule, press OA-R and select the
category that you would like to use. Now choose one of the
operations of comparison that are displayed on your screen.

All of the selection rules shown here, except *is blank* or *is
not blank* also require you to enter the value or text for use in
the comparison. Enter this information on the prompt line when

Figure 3-16. Selection Criteria

```
File: Class List              SELECT RECORDS      Escape: Review/Add/Change

Selection: Last Name
```

```
==========================================================================
 1. equals
 2. is greater than
 3. is less than
 4. is not equal to
 5. is blank
 6. is not blank
 7. contains
 8. begins with
 9. ends with
10. does not contain
11. does not begin with
12. does not end with


--------------------------------------------------------------------------
Type number, or use arrows, then press Return                   43K Avail.
```

asked. You may now begin your second rule by choosing a connector (*and, or,* or *through*). Or, if you're satisfied with the selection criteria as it is, press Escape to return to the Review/Add/Change screen. You now see only those records that meet your selection criteria. The Selection Line at the top of the screen restates your criteria exactly as you entered it. To set the selection back to the default setting, All records, press OA-R again and answer *yes* to the question *Select all records?*.

To arrange (sort) your Data Base records in a certain order, be sure you're in multiple-record format. Place the cursor on the desired category. Press OA-A, and then choose an arrangement order from the menu.

Your records are displayed according to the arrangement order you selected. You can further refine your arrangement by using the Arrange command again with another category.

Finding Information in Records

You can find records that contain a particular piece of information by using the Find command (OA-F). Use this command from either multiple- or single-record layout. Press OA-F and type in the comparison information. *AppleWorks*

searches all categories in all records for the information and displays all records found to contain the information. Now delete, copy, or arrange these records as you like. To return to the Review/Add/Change, screen press Escape.

Figure 3-17. Arrangement Screen

```
File: Class List              ARRANGE (SORT)       Escape: Review/Add/Change

Selection: All records


====================================================================================

                      This file will be arranged on
                      this category: Last Name

                      Arrangement order:

                          1.  From A to Z
                          2.  From Z to A
                          3.  From 0 to 9
                          4.  From 9 to 0




---------------------------------------------------------------------------------
Type number, or use arrows, then press Return                      43K Avail.
```

Printing Reports

You can print two kinds of reports using data from your Data Base files. A table report looks like the multiple-record layout on your screen, while the label report looks like the single-record layout. If you need a telephone list or roster, use the table report. If you need to print on mailing labels or index cards, or if you want to zero in on all the information in a single record, use the label report.

To print a report, start with the Report Menu. You get to this menu by using the Print command (OA-P).

All five of the options on the Report Menu refer to a *report format*, which defines the way a report is printed. Every time you create a report format, *AppleWorks* remembers it and saves it with your file so that it can be used again and again. You can store up to eight report formats with each Data Base file.

Figure 3-18. Report Menu Screen

```
File: Class List              REPORT MENU        Escape: Review/Add/Change
Report: None
═══════════════════════════════════════════════════════════════════════



        1.  Get a report format
        2.  Create a new "tables" format
        3.  Create a new "labels" format
        4.  Duplicate an existing format
        5.  Erase a format




------------------------------------------------------------------------
Type number, or use arrows, then press Return              43K Avail.
```

Option 1, get a report format, allows you to load an already-created format from a list. When you choose this option and any previously created format, *AppleWorks* takes you to the Report Format screen.

Option 2 and 3 of the menu allow you to create new report formats for the table or label reports. Both of these options require you to enter a name for the format before *AppleWorks* will take you to the Report Format screen. Give your report format a name that helps you remember whether it is table or label format, and to remember what it's used for.

Use option 4, duplicate an existing format, when you want to modify an existing format and save it under a different name.

Option 5 allows you to delete one of the formats. Use this option when you no longer need one of your formats.

Whether you choose to use an existing report format or create a new one, *AppleWorks* takes you to the Report Format screen. This is where you tailor the format to your needs.

The Report Format screen for table reports looks and works differently than that of label reports. Each of these types of reports are discussed separately below.

Table Reports

When you choose option 2, create a new tables format, from the Report Menu screen, follow the prompt-line instructions to give the report a name. Press Return and you'll see the following screen:

Figure 3-19. Table Report Format Screen

```
File: Class List                REPORT FORMAT              Escape: Report Menu
Report: ClassTable
Selection: All records


======================================================================
--> or <--  Move cursor                 Ç-J  Right justify this category
 >  Ç   <   Switch category positions   Ç-K  Define a calculated category
--> Ç  <--  Change column width         Ç-N  Change report name and/or title
Ç-A  Arrange (sort) on this category    Ç-O  Printer options
Ç-D  Delete this category               Ç-P  Print the report
Ç-G  Add/remove group totals            Ç-R  Change record selection rules
Ç-I  Insert a prev. deleted category    Ç-T  Add/remove category totals
----------------------------------------------------------------------

First Name   Nickname    Last Name    Address      City/State   Zip Code    P
-A---------- -B--------- -C---------- -D---------- -E---------- -F--------- -
William      Bill        Anderson     4687 Treecre Solona Beach 92078       9
James        Jim         Burns        817 W Grand  Encinitas, C 92024       9
Cheryl                   Cavanaugh    943 Concord  Encinitas, C 92024       9

----------------------------------------------------------------- More --->
Use options shown above to change report format            42K Avail.
```

The Report Format screen for table reports looks much like the Change Record Layout, but it has many more command options. It is at this screen that you define the way your table report will look when it's printed.

At the top of the screen, you see standard *AppleWorks* screen information: filename, title, and Escape destination. You also see the name of the Report Format and the current selection rules. Listed in the center of the screen are commands to reformat the categories in the bottom half of the screen. Below them are your categories with some of their data to show you what the report will look like when printed.

Table Format List

Open Apple Commands, which require you to press the Open Apple key and some other key, are indicated in this book with the letters OA.

→

Moves the cursor to the right from category to category. If you have many categories, there may be some off the screen to the right. Scroll to these using this command.

←

Moves the cursor to the left from category to category.

OA->

Switches the category the cursor is on with the one on its immediate right.

OA-<

Switches the category the cursor is on with the one on its immediate left.

OA-→

Press once to make the category wider by one character.

OA-←

Press once to make the category narrower by one character.

Arrange (OA-A)

Arranges the records of the category the cursor is on according to the ordering option that you choose from a menu. This command works exactly like it did in the Review/Add/Change screen.

Delete (OA-D)

Deletes the category the cursor is on from the report format. This does not permanently delete the category from the Data Base file.

Group Totals (OA-G)

This defines or undefines the category the cursor is on as the group total category for printing totals and subtotals. See Totals (OA-T) to set up categories to be totaled. As

AppleWorks prints the report, whenever the value in the group total category changes, subtotals are printed for all categories selected to be totaled. When you set up the category as the group total category, *AppleWorks* asks you whether you want to print group totals only. If you answer *yes* to this option, then only those categories that have been set to be totaled are printed. If you answer *no*, then *AppleWorks* prints all categories and gives you the option to go to a new page after each group total is printed. *AppleWorks* indicates that a category has been selected for group totaling just above the dashed line over the list of commands.

Insert (OA-I)

Allows you to insert a previously deleted category.

Justify (OA-J)

Allows you to right-justify categories in their columns. This is particularly useful for categories that contain number values, since numbers are easier to read if they are aligned flush right in a column. *AppleWorks* allows you to set the number of decimal places to be used and the number of spaces to be printed between a column and the one to its right. A series of nines are displayed with your data to show that the category is justified.

Calculate (OA-K)

Inserts a new calculated category to the left of the category the cursor is on. OA-K is used to print a value that is calculated from other categories in the same record. This new category is automatically named Calculated, but you can always change the name. This special category prints a value according to a formula that you define. The formula may contain addition (+), subtraction (−), multiplication (*), division (/), constant numbers, and letters corresponding to existing categories. (The letters are displayed on the screen directly below the category name.) You may not use parentheses in this formula. With *AppleWorks*, you can set the number of decimal places you want to have displayed

and then set the number of spaces you want to have sepa-
rating two columns.

Change Name (OA-N)

Allows you to change the name of the format or the title
of the report. If you want to save the report format with a
new name, use this command to do it. Remember that
AppleWorks automatically saves report formats with the
file. The title of the report, which may consist of any text
up to 79 characters in length, appears at the top of each
printed report page. (Printer options are discussed in
greater detail in a following section.)

Printer Options (OA-O)

Allows you to set print options to control the printing of
your report. (See the section concerning Printer Options
which follows.)

Print (OA-P)

When you are satisfied with the format that you have de-
fined, use this command to execute the print. (Further de-
tails about printing can be found in a later section.)

Record Selection (OA-R)

Allows record selection according to rules that you set up.
AppleWorks only prints the records that are selected. This
works the same as it did on the Add/Review/Change
screen.

Totals (OA-T)

Use this to set the category that the cursor is on as the one
to be totaled. When a category is set to be totaled, *Apple-
Works* adds up the values in the category and prints the to-
tal at the bottom, with an asterisk (*) beside it. You can
also subtotal various values in a totaled category with the
Group Total command (OA-G). With *AppleWorks*, you can
set the number of decimal places you want in columns
plus the number of spaces you want to have separating
two columns from each other. A totaled category is indi-
cated by dashes at the bottom of the column.

Label Reports

To see the Report Format screen for label-type reports, choose option 3, create a new labels format from the Report Menu screen.

Figure 3-20. Label Report Format Screen

```
File: Class List            REPORT FORMAT            Escape: Report Menu
Report: ClassLabel
Selection: All records


=================================================================
First Name
Nickname
Last Name
Address
City/State
Zip Code
Phone Number
Father's Name
Mother's Name
Gender
ID Number
Reading Level
Math Level
----------------------Each record will print 13 lines--------------------


-----------------------------------------------------------------
Use options shown on Help Screen                      ⌂-? for Help
```

It is at this screen that you define the way your label report looks when it's printed. The dashed line below your categories tells you how many lines will be printed for each label (a maximum of 15 lines). To see the commands available to change the format of the categories, press (OA-?). Notice that (OA-R) and (OA-A) are among those you may use to select and arrange records for specific printing purposes.

One particularly helpful option when defining your label format is Zoom (OA-Z). Use this command to display your actual records instead of just the category names. This way, you can see how your records would actually look if printed. If you are "zoomed" in on your actual records, use the Ruler commands (OA-1 through OA-9), OA-<, and OA-> to scroll through your records.

Label Format List

Note: Be sure to place the cursor on the first character of the category that you want the command to apply to. Open Apple Commands, which require you to press the Open Apple key and some other key, are indicated in this book with the letters OA.

→

    Moves the cursor to the right one character.

←

    Moves the cursor to the left one character.

↑

    Moves the cursor up one line.

↓

    Moves the cursor down one line. Also inserts lines if you scroll past the last line on the bottom of the label.

OA-→

    Press once to move the category to the right one space.

OA-←

    Press once to move the category to the left one space.

OA-↑

    Press once to move the category up one line (there has to be room above it for it to move).

OA-↓

    Press once to move the category down one line (there has to be room below it for it to move).

OA-1 through OA-9

    These commands help you move quickly through the records. You must Zoom (OA-Z) to your actual records before you can use these.

OA->

    Displays the next record using the current format. You must Zoom (OA-Z) to your actual records before you can use this.

OA-<

Displays the previous record using the current format. You must Zoom (OA-Z) to your actual records before you can use this.

Arrange (OA-A)

This arranges the Data Base entries in a category according to the ordering option that you choose from a menu. This command works exactly like its counterpart in the Review/Add/Change screen.

Delete (OA-D)

Deletes a category from the report format. This does not permanently delete the category from the Data Base. You can also use this to delete blank lines from the label format.

Insert (OA-I)

Allows you to insert a previously deleted category at the present cursor position or at a blank line above or below the cursor.

Justify (OA-J)

Use to set and unset left-justification for a category. This is helpful when printing categories alongside each other, as in "Last Name, First Name," as opposed to single-record layout's usual piggyback format. When a category is left-justified, it guarantees a one-space buffer between the justified category and the category to its left. The less-than sign (<) designates a left-justified category.

Change Name (OA-N)

Allows you to change the name of the format or the title of the report. If you want to save the report format with a new name, use this command to do it. Remember that *AppleWorks* automatically saves report formats with the file. The title of the report can be any text up to 79 characters in length and appears at the top of each page of the report. (See "Printer Options" in a later section.)

Printer Options (OA-O)

Allows you to set print options to control the printing of your report. (See "Printer Options" below.)

Print (OA-P)

When you are satisfied with the format that you have defined, use this command to execute the print. (See "Printing," in a following section.)

Record Selection (OA-R)

Allows record selection according to criteria that you set up. *AppleWorks* only prints the records that are selected. This works the same here as in Review/Add/Change.

Standard Value (OA-V)

Sets and unsets a category to print the category name with its entry. The category name comes first, then comes a colon, and then the actual entry.

Zoom (OA-Z)

Use this to switch between the display of category names and the records display.

Printer Options

Press OA-O while in the Report Format to see the Printer Options screen. On this screen are the settings for various print options that control horizontal and vertical spacing and other report formatting options. Change the values of these options to customize your report. In the middle of the screen are the values set for line width, characters per line, printing length, and lines per page. Keep an eye on these values, as they are often at the root of problems encountered while printing.

To set print codes for a Data Base file, first type the two-letter code and then enter any extra information that is needed. The left margin code, for instance, requires you to enter the actual number of inches you want the margin to be.

The list below includes all the print codes on the Printer Options screen, and it tells how they work to control the printing of your report.

Print Code List

PW Platen Width

The distance that the printer head can travel from left to right. It is normally eight inches. If you have a wide-carriage printer, then it will be more. You can change this if you are using narrower paper than your printer normally uses.

LM Left Margin

The number of inches that *AppleWorks* leaves on the left side of your paper as a margin. It is set to the nearest .10 inch.

RM Right Margin

The number of inches of margin that *AppleWorks* leaves on the right side of your paper. It is set to the nearest .10 inch.

CI Chars per Inch

The number of characters that are printed per inch of text. The higher this number is, the greater the number of characters that can fit on one line. Most printers aren't able to offer all possible characters-per-inch settings, so consult your printer manual before setting this code.

PL Paper Length

This setting tells *AppleWorks* the length of one sheet of your paper. Normal computer paper is 11 inches long, but if you are printing on special forms or mailing labels that are not 11 inches long, you need to set the paper length. It is set to the nearest .10 inch. *AppleWorks* uses this value to calculate page breaks—the place where one page ends and the next begins. If you set this value to anything other than 11 inches, you need to set up your printer so that it does not recognize top-of-page commands; otherwise, your printer will form feed to the top of what it thinks is an 11-inch page. See the section on setting up your printer in this chapter for more information on top-of-page commands.

TM Top Margin

The number of inches that *AppleWorks* leaves blank on the top of your paper. It is set to the nearest .10 inch.

BM Bottom Margin

The number of inches that *AppleWorks* leaves blank on the bottom of your paper. It is set to the nearest .10 inch.

LI Lines per Inch

This sets the number of lines that fit within one vertical inch of your paper. It can be set to either 6 (standard) or 8 (condensed).

SC Special Codes

Use this to set any special print codes that you desire, such as condensed characters or color. See the printer codes section of "How to Set Up Your Printer" in this chapter to learn about the special entry requirements for print codes.

PD Print a Dash

Set this to Yes if you would like *AppleWorks* to print a dash (-) for any category that is blank in a record.

PH Print Header

Set this to No if you don't want to include the title (if you entered one with OA-N), filename, report name, selection rules, page number, and date (if you entered one) at the top of each page. Leave this set to No and make sure that you don't have a title if you are printing mailing labels.

SS Single Spacing

Table format only. Sets single spacing.

DS Double Spacing

Table format only. Sets double spacing.

TS Triple Spacing

Table format only. Sets triple spacing.

OL Omit Line

Label format only. Set this to No if you don't want to omit a line when all of the entries on the line are blank.

KS Keep Same

Label format only. Set this to No if you don't mind some labels taking up fewer lines than others. This should remain Yes if you are printing mailing labels.

Printing

When you are ready to print, press OA-P at the Report Format screen. *AppleWorks* displays a menu of possible locations to print the report. You can choose to print the report to a printer, the screen, the Clipboard, a text (ASCII) file, or a *DIF* file on disk. If you want a preview of how it will look on paper, print it to the screen. This way you can change any mistakes in your format before you actually print it to a printer, the Clipboard, or a disk.

Printing to the Clipboard is convenient when you want to "paste" your report into a Word Processor document, and when you want to use the data in your database for Mail Merge (*AppleWorks* version 2.0 or later). See the section later in this chapter on using the Clipboard for integration for more information on these.

Printing to a text (ASCII) file on disk is necessary if you want to use your Data Base file in another program, or if you want to transport it over communication lines. Printing to a *DIF* file on disk is useful if you want to either load your Data Base into another database program or convert it to an *Apple-Works* Spreadsheet file.

After you have chosen the destination of the print, enter the date of the report to be used in the header, if you're using one. If you are printing to a printer, also enter the number of copies that you wish to print. If you are printing to a text or *DIF* file on a disk, you also need to provide a ProDOS pathname.

When the file is being printed—either to the disk or the printer, but not to the Clipboard—you can stop the printing and return to Report Format by pressing Escape. If you would like to pause the printing, press the space bar. To continue printing, press it again. When the printing is complete you are returned to the Report Format screen.

Saving

You may save your file at any time from the Data Base with the Save command (OA-S). *AppleWorks* saves your file onto the current disk with the same filename that is noted at the top of the screen. Any Data Base file with the same name is replaced without further verification. Be sure you want to replace any existing file with that name before executing Save. To save the file under another name, change the filename with the Change Name command (OA-N). During the saving process, *AppleWorks* gives you one last chance to change your mind. For a few seconds during the beginning of the save, you can press Escape to cancel the save and return to Review/Add/Change. Remember, you only have a few seconds to cancel, so think before you execute the Save command.

    You may also save your Data Base file from the Main Menu by choosing either 3, Save Desktop files to disk, or 6, Quit. It is probably safer to save your file from the Main Menu. There, you are required to verify that you want the file to replace any existing file on disk with that name.

    Saving is important. Power failures, glitches, human error, or even a program error can cause you to lose valuable, unsaved data. It is best to save your files frequently.

Using the Spreadsheet

Launch the Spreadsheet application just as you do the Word Processor or the Data Base: Either create a new file from scratch or load an already existing one from disk. "Using the Desktop" (in this chapter) offers instruction on both procedures.

    The following overview describes the versatility of the Spreadsheet as well as its features and commands. It includes a complete explanation of the mathematical functions available in the Spreadsheet. For more details on particular commands, refer to the Command Summary in Chapter 4.

Creating a New Worksheet

The term *worksheet* is used to describe your Spreadsheet file. The worksheet is divided into cells which are referenced by a two-dimensional coordinate system of rows and columns. The

cell in the upper left corner of your worksheet—Column A, Row 1—is referenced by the coordinates A1 (note that no comma is necessary). The maximum number of cells allowable in your worksheet is 126,873 (127 columns by 999 rows). But unless you have more than one megabyte of expansion memory, you will exhaust your computer's memory long before you fill up a worksheet. A 128K-RAM machine can hold a worksheet consisting of approximately 6000 cells.

Figure 3-21. Blank Worksheet

```
File: New                      REVIEW/ADD/CHANGE              Escape: Main Menu
=======A=======B=======C=======D=======E=======F=======G=======H===
  1 |▒▒▒▒▒▒▒|
  2 |
  3 |
  4 |
  5 |
  6 |
  7 |
  8 |
  9 |
 10 |
 11 |ˡ
 12 |
 13 |
 14 |
 15 |
 16 |
 17 |
 18 |
--------------------------------------------------------------------
A1

Type entry or use ⌂ commands                           ⌂-? for Help
```
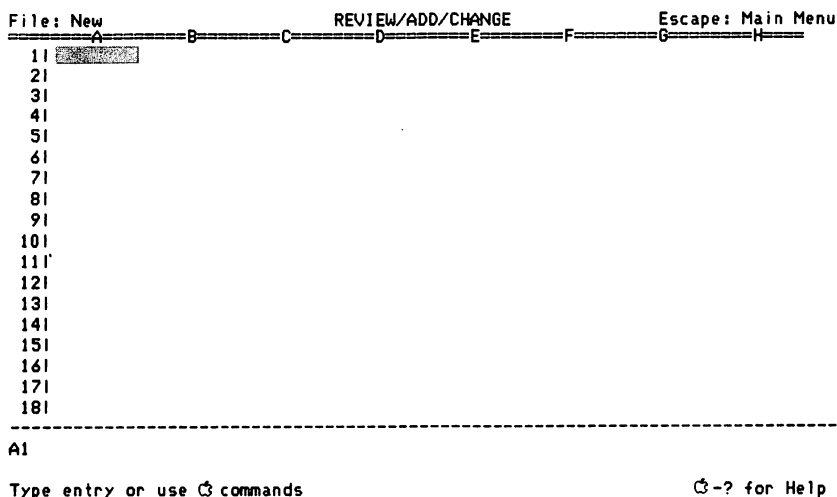
This blank worksheet screen shares many of the same features other *AppleWorks* screens display: the filename in the upper left corner, the title centered at the top of the screen, the Escape destination in the upper right, a prompt line on the bottom, and the availability of Help (OA-?).* Across the top and down the left side are the column and row indicators, respectively. Most of the screen is reserved for the worksheet itself.

The highlighting on the screen is called the *highlight bar.* Use this bar as you would use the cursor in the Word

---

* Open Apple Commands, which require you to press the Open Apple key and some other key simultaneously, are indicated in this book with the letters OA.

Processor; move it to the cell that you want to work on, or to the part of the worksheet that you want to see.

To appreciate the function of the Spreadsheet, think of your worksheet as a large electronic grid that helps you organize and calculate numbers easily. Other than the column, row, and memory constraints, you are given free reign to organize and use the worksheet however you like. Using the highlight bar, you can move to any cell and enter either a *label*, a *value*, or a *formula* (which calculates a value).

A *label* is any text entry that you want to use to annotate your worksheet. *AppleWorks* does not do any calculations using labels. Use labels liberally to title your worksheet, describe rows and columns, or designate blocks of cells in your worksheet. You can even write lengthy notes to help explain formulas or other parts of your worksheet.

A *value* is any constant number; a *pointer* is a variable that references a value in another cell or a number that is calculated from a formula.

A *formula* is a mathematical expression that uses numbers, pointers, operators [+ , − , * , / , ( )], and functions to calculate values for the contents of any number of specified cells. Since *AppleWorks* displays the calculated value in a cell containing a formula, formulas are also referred to as values.

Using formulas is where the power of the Spreadsheet lies. *AppleWorks* can calculate hundreds of formulas in a matter of seconds. With this speed you can do all kinds of *what-if* calculations with your worksheet—seeing how changing one set of values affects the outcome of the rest of the worksheet.

In the lower part of the screen, the two lines above the prompt line are reserved for special Spreadsheet purposes. The first line is the *cell indicator* line. This line shows the coordinates of the cell where the highlight bar is, the type of entry it is (Label or Value), any special layout or protection it has, and the cell entry itself. If the entry is calculated by a formula, the formula is displayed on this line rather than the value. The line below the cell indicator line (directly above the prompt line) is the line reserved for making entries. When you begin making an entry in a cell, the cursor jumps to this line and al-

lows you to see what you are typing. It also shows you what type of entry it is (Label or Value).

Moving the Highlight Bar

You can see only part of the worksheet at any one time. *AppleWorks* gives you commands to move the highlight bar to view the different areas of the worksheet. If you move the highlight bar to the left (or right) edge of the screen, the worksheet scrolls over so that you can see the previous (or next) column. If you move the bar to the top (or bottom) edge of the screen, the worksheet scrolls to the previous (or next) row. Use the left-arrow (←), right-arrow (→), up-arrow (↑), or down-arrow (↓) key to move the highlight bar one cell left, right, up, or down, respectively. When typing in an entry, use any of the arrow keys to verify an entry and move the high-light bar at the same time. This feature allows you to enter rows or columns of entries quickly, because you don't have to press Return after pressing the arrow key. OA-←, OA-→, OA-↑, and OA-↓ move the highlight bar a screen at a time through the worksheet—left, right, up, or down, respectively.

You can use the Ruler commands (OA-1 through OA-9) to move the highlight bar to relative points within the same column. OA-1 moves it to row 1, while OA-9 moves it to the last row in your worksheet that has an entry. The commands OA-2 through OA-8 move the highlight bar proportionately to points in between.

Changing Entries

When you move the highlight bar on to a cell that already has an entry, you can completely change the entry by just typing a new entry. If you begin typing and decide that you really would rather have the old value, you can press Escape— before pressing Return, Tab, or an arrow key—to restore the old value. You can see what the old value is by looking at the cell indicator line.

If you don't want an entry in the cell at all, use the Blank command (OA-B) to blank out the entry; you can also use this command to blank out whole groups of cells. If you just want to edit the contents of the cell, use the Edit Cell command

(OA-U). When you press OA-U, the entry appears on the entry line with the cursor flashing on the first character. You are then able to edit the entry using the standard *AppleWorks* editing conventions (←, →, Delete, OA-E, OA-Y). Press Return when you've finished editing, or Escape to restore the old entry.

Entering Labels

To enter a label in a cell, move the highlight bar to the desired cell, type the label (always beginning with a letter) and press Return, Tab, or an arrow key. As you type text, you can see it being entered in two places: directly in the cell and on the line above the prompt line (after the word *Label*). If your label is longer than the cell width, the highlight bar moves to the next cell (unless there is a value there), so that you can enter more. If there is a value in the next cell, *AppleWorks* still allows you to enter up to 70 characters; it just doesn't display all of them. You can display more characters in a cell by widening the col-umn using the Layout command (OA-L). To enter a number or a special character (!, @, #, $, %, ^, &, and so on) as a label, type a quotation mark (″) before entering the character. This tells *AppleWorks* to expect a label. *AppleWorks* treats this spe-cial character the same as any other label.

A cell filled with the same character throughout is called a *repeated label*. As you change the column width of a repeated label, *AppleWorks* adds or subtracts the same character so that the cell remains filled with that character, no matter how wide or narrow it gets. Use repeated labels when you're making borders or boxes.

Entering Number Values

To enter a value in a cell, move the highlight bar to the cell, type in the number, and press Return, Tab, or an arrow key. As you type, the entry shows up in the entry line next to the word *Value*, but not in the cell. It is displayed in the cell after you've completed the entry by pressing Return, Tab, or an ar-row key. If the number is too large to fit in the cell, a series of number-sign characters (####) are entered instead. You can widen the column by using the Layout command (OA-L).

Entering Pointer Values

A pointer is a reference to another cell. Whatever the value in the other cell, it is copied into the pointer cell. You can enter a pointer into a cell by itself, or include it in either a formula or as part of a function.

To enter a pointer by itself, first type a plus (+) or a minus (−) sign; then type the coordinates of the cell that you want to reference. Be sure to enter the coordinates with the column first and the row second (for example, +A1, −B2, +C3, and so on).

There is one other way to enter a pointer. After the plus (or minus) sign, use the arrow keys to place the highlight bar on the cell that you want to reference and press Return. The coordinates of that cell are used as the pointer, and the highlight bar returns to the original cell.

Entering Formulas and Functions

Formulas used in the Spreadsheet follow standard algebraic conventions. They can contain numbers, pointers, functions, and operators. The operators you can use are + , for addition; − , for subtraction; * , for multiplication; / , for division; ^ , for exponentiation, and ( ) , for grouping expressions. Using these different components, you can formulate whatever mathematical formulas meet your needs. The formula can be as simple as a single pointer or as complex as you can imagine. Every time you make a change in the spreadsheet, all of the formulas previously entered are calculated and the results are displayed in their cells. If you encounter troublesome inconsistencies or unlikely calculations in a worksheet, it is most likely because of an invalid or mistyped formula.

The following are valid formulas:

10 − 5
+A1 * 5
(A7 ^ 2) * (SUM (A1...C1))

To enter a formula, place the highlight bar on the cell where you want the formula and type it in. A formula must begin with a number, a plus or minus sign, a left parenthesis, or an *at* sign (@) which starts a function. Extra spaces entered

in the formula to differentiate between terms are okay, and don't affect the calculation. Basically, *AppleWorks* calculates the formula from left to right, but expressions enclosed by parentheses take precedence, so be sure to enclose the ones that you want evaluated first. As you type the formula, it is displayed in the entry line next to the word *Value* (remember that a formula is considered a value). When you press Return, Tab, or an arrow key, the formula is evaluated and the resulting value is displayed in the cell. The highlight bar on the screen in Figure 3-22 rests on a cell that has a formula in it. Look at the formula in the cell indicator line.

Figure 3-22. Worksheet with Highlight Bar on a Formula

```
File: New                  REVIEW/ADD/CHANGE           Escape: Main Menu
========A========B========C========D========E========F========G========H====
  1 |
  2 |          78
  3 |          54
  4 |          32
  5 |          16
  6 |          76
  7 |          32
  8 |          12
  9 |          13
 10 |          14
 11 |          14
 12 |           2
 13 |          44
 14 |      =========
 15 |         387
 16 |
 17 |
 18 |
-----------------------------------------------------------------------------
B15: (Value) @SUM(B2...B13)

Type entry or use Ô commands                        Ô-? for Help
```

When entering pointers within a formula, follow the same entry rules that apply to entering a pointer in a cell by itself. You must precede the coordinate with a plus or a minus sign, and you can either type in the coordinate or use the arrow keys to point to the cell that you want. If you use the arrow-key method to input pointers, press Return or the next character of the formula to accept the pointer that the highlight bar is on. Then continue to enter the rest of the formula.

Use the Zoom command (OA-Z) to find the cells that have values calculated from formulas. When you "zoom in,"

AppleWorks displays the formula, rather than the resulting value, in the cell. Use Zoom again to return to the normal display.

Functions

AppleWorks provides powerful *functions* (in addition to the standard mathematical operators already discussed) to help you calculate and make decisions using your spreadsheet. You can use functions as formulas by themselves or inside other formulas. Each function is preceded by an *at* sign (@) so that *AppleWorks* knows that it is not a label. Then comes the name of the function, such as AVG or SUM, and finally, the *arguments* for the function are enclosed in parentheses. These arguments tell the function what information to operate on. Types of arguments include *value, range,* and *list.*

A *value* is any number, pointer, formula, or function that can be evaluated to a number. A *range* is a series of adjacent cells indicated by their coordinates and separated by three periods, such as (A10...A40), which includes all of the cells from A10 through A40. (You only have to type one period for *AppleWorks* to understand that you want a range. The best way to enter a range is to use the arrow keys to point to the first cell in the range, type one period, then use the arrow keys again to point to the last cell of the range, and press Return.) A *list* contains single values or ranges separated by commas, such as (5,A10,C7), (B5...B10,C5...C10,D5...D10), or (5,A10,A10...A19).

In addition, a function can contain another function or formula as a value argument.

Following is an alphabetized list of functions available in *AppleWorks* with an explanation of their use.

Function List

@ABS*(value)*

   Evaluates the absolute value of its argument. The *absolute value* is the positive equivalent of a value—for example, ABS(−5) = 5 and ABS(5) = 5.

@AND(*series of logical values*)

Only available in *AppleWorks* version 2.0 or later. See "Logical Functions," below, for details.

@AVG(*list or range*)

Evaluates the arithmetic mean or *average* of the list. In calculating the average of the list, the program uses the values of any cells named in the list. For example, if A10 = 5, B10 = 6, and C10 = 7, then AVG(A10,B10,C10,8,9) = 35 / 5, or 7.

@CHOOSE(*value,list*)

Uses the given value to indicate which of the values in the list will be the result when the entire expression is evaluated. The value is most likely a pointer, and the list must be single values separated by commas. For instance, @CHOOSE(F4,.06,.065,.05) evaluates to .06 if F4 = 1, to .065 if F4 = 2, and to .05 if F4 = 3 (if F4 = 4, the result is NA).

One application for this function might be to determine which tax rate is effective, depending on the county involved. Suppose that the list contained three tax rates: .04, .045, and .05. Each county would correspond to a cell (County A1, for instance, would be the county in cell A1). Each cell would contain a value corresponding to the tax rate for that county. Thus, if County A1's tax rate were .045, the value in cell A1 would be 2, since .045 is the second rate in the list. Whenever you needed to recall that rate, the @CHOOSE function would do it instantly: @CHOOSE(A1,.04,.045,.05) = .045.

@COUNT(*list or range*)

Calculates the number of cells in the list. If the list contains a range, *AppleWorks* only counts entries with actual values. If a cell in the range is a label or is blank, it is not counted.

You define a block of cells in a range by giving the upper left cell of the block as the first value and the lower right-hand cell of the block as the second value. In the fol-

lowing formula, COUNT(B15...D17) equals 9 if all of the entries in the block of cells defined by B15 and D17 have values; the range defined consists of cells from rows 15, 16, and 17 in each of the three columns B–D.

@ERROR

This displays the word ERROR in the cell. This function can be used as an argument in the IF function to show that an error condition has occurred. *AppleWorks* also displays ERROR if it encounters an error in evaluation.

@IF(*logical value, value 1, value 2*)

See "Logical Functions," below, for details.

@INT(*value*)

This function evaluates to the integer portion of the argument. In other words, it lets you disregard the digits to the right of the decimal point in a decimal number.

@LOOKUP(*value,range*)

This function, used with either two rows or two columns, scans through the range (the values in the first row or column) looking for the largest value that is less than or equal to the first argument (*value*). It then returns the value that is adjacent to the value found. If the range is in a row of values (D5...H5), then the cells adjacent to the range are the cells in the row below (D6...H6). If the range is in a column (D5...D10), then the cells adjacent to the range are the cells in the column to the right (E5...E10).

For example, say that in a payroll spreadsheet you want to look up the raise an employee gets depending on his or her job classification. You create a lookup table in columns A and B, with column A being the job classifications and column B the raises. This is a general table used by @LOOKUP functions in other parts of your worksheet. The following table indicates the cells which correspond to the values in each column.

Lookup Table for Payroll Spreadsheet

Cell	A	*Cell*	B
E1	2	F1	$100
E2	3	F2	$200
E3	5	F3	$300
E4	7	F4	$400
E5	8	F5	$500

In another part of the worksheet you want to look up the raise for an individual employee. That employee has a job classification of 3, which you have entered in cell E10. In F10 you want the raise for that employee. You enter cell E10 as the first argument, since it contains the value to be compared in the search. The job classifications are in column A, so you enter the cells corresponding to column A as the range to be searched. The resulting function is @LOOKUP(E10,E1...E5). Looking for 3 (the value in cell E10), the Spreadsheet finds it in cell E2, and identifies the adjacent value (in F2) as $200. Thus $200 is the raise for this employee, and that is the value displayed in F10.

MAX(*list or range*)

Evaluates to the highest value in the list. If D15 = 6.5 and D20 = 6.6, then MAX(D15 + 5.0, D20 + 4.0) = 11.5

@MIN(*list or range*)

Evaluates to the lowest value in the list.

@NA

Displays NA in the cell, meaning the value is Not Available. You can use this as an argument for the IF function or as a reminder that the value that is supposed to be in a cell is not available yet. If *AppleWorks* encounters an NA value in its calculation of a formula, it displays NA for the result of the formula.

@NPV(*rate,range*)

Calculates the Net Present Value of future cash flow, given the rate (in decimal form) and the payments (in range form). As an example, your company just purchased a new machine for $33,522 that will provide an annual cash sav-

ings of $10,000 for five years. Your current cost of capital is 12 percent. Putting the five payments in D1...D5, you find that the Net Present Value of the strategy is @NPV(0.12,D1...D5) = $36,047.76. Since $36,047.76 is larger than $33,522, buying the new machine was a wise investment.

@OR(*series of logical values*)

Only available in *AppleWorks* version 2.0 or later. See "Logical Functions," below, for details.

@ROUND(*value,place*)

Only available in *AppleWorks* version 2.0 or later. This function rounds the value to the decimal place indicated. This is handy when you are dealing with dollar amounts and only want to display to the nearest cent; for example, @ROUND(2.666666,2) evaluates to 2.67. Note that this is different from just formatting the cell to show two decimal places. @ROUND actually changes the value.

@SQRT(*value*)

Calculates the square root of the argument: @SQRT(15 − 6) = 3.

@SUM(*list or range*)

Adds all the values in the list together. (You will use this function often.) If E5 = 5, E6 = 5, E7 = 13, and E8 = 1, then @SUM(E5...E8) = 24.

Logical Functions

Expressions of simple *logical values* are created using logical operators that compare two values. These logical operators are

<	less than
>	greater than
=	equal to
<=	less than or equal to
>=	greater than or equal to
<>	not equal to

If E4 = 4, some examples of simple logical values and their results are

E4 < 6	True
E4 > 4	False
E4 = 5	False
5 >= E4	True
E4 < > 4	False

You can create more complex logical value expressions by using the logical functions OR and AND. OR is true if any one of its arguments is true, while AND is true only if all of its arguments are true. The arguments of these functions are logical values themselves and are separated by commas.

If, again, E4 = 4, some examples of OR and AND and their results are

@OR(E4 < 3, E4 = 5, E4 <> 2)	True
@AND(E4 < 5, E4 = 4, E4 <> 2)	True
@OR(E4 = 5, E4 <> 4)	False
@AND(E4 <= 4, 5 <= E4)	False

AppleWorks provides you with a way to use one value rather than another depending upon whether the result of a logical value is true or false. The function to use is IF; it has the form

@IF(*logical value,value 1,value 2*)

If the logical value is true, then value 1 is returned as the result of the IF function; otherwise value 2 is returned.

Formatting Cells

AppleWorks gives you a variety of ways to format the cells in your worksheet. You can change column widths, label formats, and value formats. By using these formatting features you can greatly enhance the organization, readability, and usefulness of your worksheet. If you don't specify your own values, however, *AppleWorks* sets the formatting conventions to standard values each time you create a new worksheet. You can see what the standard formatting values are by scrolling to the very bottom of the Help text (OA-?).

Figure 3-23. Standard Formatting Values

```
File: New                              HELP              Escape: Review/Add/Change
=====================================================================================
                      ⌂-Arrows       Move to another full screen

                      0-9 + - .       Type a value

                      " or letters   Type a label

                      ⌂-1            Go to beginning of file
                        through           through
                      ⌂-9            Go to end of file

                      Current settings of standard values
                      ======================================

                      Protection is      On
                      Label format is    Left justify
                      Value format is    Appropriate
                      Frequency is       Automatic
                      Order is           Columns
-------------------------------------------------------------------------------------


Use arrows to see remainder of Help                            46K Avail.
```

If you are not satisfied with these values, change them
with the Change Standard Values command (OA-V). *Apple-
Works* formats all of the entries in your worksheet according to
these conventions. If you want the format of a single cell or a
group (row, column, or block) of cells to be different from
these standards, you can change it with the Change Cell Lay-
out command (OA-L).

When you use the OA-V command, *AppleWorks* gives you
these options in the prompt line: Value format, Label format,
Column width, Protection, and Recalculate. OA-L provides
you with the same options except for Recalculate, which is not
a layout consideration.

If you choose to change the Label format, there are three
options available: Left, Right, and Center justified. These for-
mats dictate how the label will be justified in relation to the
margins of the cell. Left justified is *AppleWorks'* standard for-
mat for labels.

If you choose to change the Value format, there are five
options available:

1. *Fixed* lets you fix the number of digits after the decimal
   point.

2. *Dollars* puts a dollar sign before each entry, puts negative values in parentheses, and sets off thousands with commas.
3. *Commas* sets off thousands with commas, puts negative values in parentheses, and lets you fix the number of digits after the decimal point.
4. *Percent* multiplies the entry by 100 and adds a percent sign after the entry.
5. *Appropriate* displays only the number of decimal places that are significant for a calculation. (*AppleWorks'* standard value format displays the value as it was typed in.)

If you choose to change column widths, you can change all of the column widths (OA-V) or just some of them (OA-L). *AppleWorks* sets the standard column width to nine characters for all columns when you first create your worksheet. Many times you won't need that much space for your columns. Trimming the column width not only allows you to get more data on the screen, but also permits more data per sheet of paper when your worksheet is printed.

The Protection and Recalculate options on the OA-L and OA-V prompt lines are explained later.

Inserting and Deleting Rows and Columns

If you need to add rows and/or columns to your worksheet, use the Insert command (OA-I). On the other hand, if you need to delete any extraneous space, use the Delete command (OA-D).

To use the Insert command (OA-I), place the highlight bar on the row directly above the space where you plan to insert the extra row(s), or on the column just left of the space where you plan to insert the extra column(s). Press OA-I, choose Rows or Columns, and specify a number in the range 1–9.

To delete, place the cursor on the first row or column that you want permanently removed and press OA-D. Choose Rows or Columns, highlight the rows or columns that you want to delete, and then press Return.

Whenever you insert or delete rows or columns, *Apple-Works* reformats your worksheet so that the row and column numbers and letters remain consecutive and the formulas reference the correct cells.

Moving and Copying Cells

As with the other two applications in *AppleWorks*, you can move (OA-M) or copy (OA-C) information within the worksheet as well as to or from the Clipboard. Remember that moving deletes the information from its place and puts it somewhere else, while copying leaves the information that has been copied intact.

The Copy command (OA-C) is especially helpful in the Spreadsheet to copy formulas to other cells within a worksheet. You can copy one cell, or you can copy a range of cells, as long as the range contains consecutive cells within a row or column. To copy cells within a worksheet, place the highlight bar on the cell (or at the beginning or end of the range of cells) and press OA-C. Choose Within spreadsheet (from the prompt line) and press Return. If you're defining a range to be copied, you will then do so by moving the arrow keys to highlight the adjacent cells; this shows the *Source* of your move (the prompt line refers to these originally selected cells as your Source). Next, press Return.

To make a single copy of the selection, place the highlight bar in the Destination cell (or in the top left cell of the Destination range). Then press Return.

You must enter a period if you wish to select more than one Destination for the copy (and all Destinations must be adjacent to each other). After you have selected the proper Destinations, press Return. The copied information will replace (rather than displace) your original data.

If a pointer (a reference to a particular cell in the spreadsheet) is found in one of the Source cells, *AppleWorks* requires you to make a decision as to whether you would like to make a relative copy of the pointer or just copy the pointer directly without changing it. From the prompt line choose No change if you want the pointer to remain the same, or Relative if you would like *AppleWorks* to change it to a new pointer with the same relative position that it held in the Source cell.

To *move* rows or columns within a worksheet, place the highlight bar at the beginning or end of the range that you want to move and press OA-M. Choose Within spreadsheet, and either Rows or Columns, from the prompt line. Next, use

the highlight bar to define the row(s) or column(s) you wish to move (to a maximum of 250 rows or 125 columns). When you have finished the selection, press Return. To move the selection, place the highlight bar in the row directly below (or in the column just to the right of) the desired location and press Return. *AppleWorks* then moves the defined rows or columns, and reformats the worksheet accordingly. Any formulas that you move continue to refer to the same cells in the worksheet, even if their row and column numbers have changed.

For information on moving and copying information between two Spreadsheet files, see "Using the Clipboard for Integration" later in this chapter.

Arranging Rows

You can arrange (OA-A) your spreadsheet rows according to the contents of a certain column. If you are using the spreadsheet to keep track of employee payroll, you may want to order the rows alphabetically by employee name. At other times, you might want to order rows by increasing or decreasing salaries. This also may be helpful in a home budget when you want to see how your expenses rank. *AppleWorks* gives you the following arrangements to choose from: Labels from A to Z, Labels from Z to A, Values from 0 to 9 (from lowest to highest), and Values from 9 to 0 (highest to lowest).

To arrange some or all of your worksheet rows, place the highlight bar on the row that you want to start with and the column which determines the way you want to arrange the rows. Press OA-A; then highlight the rows that you want to arrange. Choose the arrangement order from the menu and press Return. Your worksheet is now redisplayed according to the order that you specified.

Finding Information

You can find either text or a coordinate in your worksheet by using the Find command (OA-F). When *AppleWorks* finds the text or the coordinate that you specify, the highlight bar jumps to that cell. When your worksheet is very large, using the find command helps you move around it quickly.

To find text in your worksheet, press OA-F; choose Text from the prompt line, type in the text that you want to find, and press Return. *AppleWorks* only searches those cells which have labels in them, since values are not considered text.

To find a specific cell in your worksheet, press OA-F; choose Coordinates from the prompt line, enter the coordinates of the cell that you want to jump to, and press Return. You're at the cell in an instant.

To repeat a find using the text or coordinate that you last entered, press OA-F and choose Repeat Last from the prompt line.

Calculating

There is a setting in the Spreadsheet that tells *AppleWorks* when and how to calculate the formulas found in your worksheet. You can change the frequency and order in which *AppleWorks* calculates using the Set Standard Values command (OA-V) and choosing the Recalculate option from the prompt line. You are then given two more options: Order and Frequency.

Choosing Order allows you to set the order in which *AppleWorks* calculates your spreadsheet. The normal order is by columns, meaning that *AppleWorks* calculates all formulas in column A before going on to Column B. If you set this order to Rows, *AppleWorks* calculates the worksheet row-by-row, starting with row 1. The only time you need worry about the calculating order is when you have formulas that reference cells which have not been calculated yet. In order to reference cells that are both below and to the left of a formula, use column-by-column calculation. If the formula references cells that are both above and to the right of the formula, use row-by-row calculation.

If both cases occur in a single worksheet, you have a problem; neither of the methods will be sure to evaluate both types of references before the actual formula is encountered. These types of references, called *forward references*, should be avoided. Sometimes you can't avoid them, though. When they occur, let *AppleWorks* calculate the worksheet once; then manually recalculate it using the Calculate command (OA-K).

You can also change the frequency of calculation. *Apple-Works* normally calculates every time you change an old value entry or enter a new one. (The word *Calculating* appears on the prompt line, sometimes—in small worksheets—so rapidly that you miss seeing it.) You can turn off this automatic calculation by choosing Frequency from the Recalculate prompt line, and setting the Frequency to Manual. You may want to choose this setting if you are going to be entering a lot of values, or when your worksheet is large and you only need to see the results occasionally.

Protecting Cells

Once you have spent hours setting up your worksheet and entering the data, you don't want to ruin it by accidentally making an entry in a wrong cell. *AppleWorks* provides a feature to protect your cells from such mistakes. You can turn Protection on and off for a cell or a group of cells using the Change Cell Layout command (OA-L).

To set Protection, press OA-L, define the cell(s) that you want to protect; then choose Protection from the prompt line. *AppleWorks* then gives you four different protection schemes:

1. *Labels only* allows only labels to be entered in the cells indicated.
2. *Values only* allows only values to be entered in the cells indicated.
3. *Nothing* allows nothing to be entered in the cells indicated.
4. *Anything* allows anything to be entered in the cells indicated. This is actually no protection at all, but it allows you to leave some cells open to entry at the same time that others are being protected.

Choose the type of protection desired and press Return.

Once you have protected cells in your worksheet, you can turn Protection on and off for the whole worksheet using the Set Standard Values command (OA-V). This is like having a master power switch that governs all of the individual switches. To turn off Protection for the whole worksheet, press OA-V, choose Protection from the prompt line, and set it to No.

Freezing Titles

The Freeze Titles command (OA-T), allows you to fix the entries at the left side, top side, or both the left and the top sides of the screen. Use this command so that column and/or row labels (also called *titles*) won't scroll off the screen when you move the highlight bar off the screen to the right or the bottom. With frozen titles, you can always see the label for your columns or rows, even if you're in cell K200.

To freeze titles, put the highlight bar to the left of the row titles that you want to freeze and/or below the column titles that you want to freeze. Then press OA-T. Choose Top to freeze only the column titles; Left side, for only the row titles; or Both to freeze both the column and row titles. To unfreeze the titles, press OA-T again and choose None.

Windows

Another nice Spreadsheet feature, especially when you're working with large worksheets, allows two windows on the screen at the same time.

Figure 3-24. A Two-Window Screen

```
File: Loan Analyzer            REVIEW/ADD/CHANGE           Escape: Main Menu
=========A=========B=========C=========D=========E=========F=====
  3|           Enter Loan Amount, Annual Interest Rate and
  4|           let AppleWorks do the rest.
  5|
  6|           Loan Amount -----------)  $3,600.00
  7|           Annual Interest Rate --)     13.90%
  8|           Loan Term in Months ---)        60
  9|
 10|           Monthly Interest Rate ->      1.16%
 11|           Monthly Payment -------)    $83.58
=========A=========B=========C=========D=========E=========F=====
 75|               Year    Interest
 76|                  1     $467.11
 77|                  2     $387.70
 78|                  3     $296.52
 79|                  4     $191.82
 80|                  5      $71.60
 81|                       ============
 82|           Total       $1,414.75
-----------------------------------------------------------------
D11: (Value) +D6*D10/(1-((1+D10)^-D8))

Type entry or use ⌕ commands                        ⌕-? for Help
```

97

There appear to be two worksheets on the screen, one on top of another. This is really two different views of the same worksheet. Each window is independent of the other, and you can jump from one to the other with the press of a key. With this feature you can change the value in one window and see how it affects a cell in the other, even if the cells are hundreds of rows or columns apart.

To create a two-window screen display, place the high-light bar in the row or column that you want to define as the beginning of the second window, and press OA-W (Create Window). You may now split the screen vertically by choosing Side by Side, or horizontally by choosing Top and Bottom. If you choose Side by Side, you see two sets of row numbers. If you choose Top and Bottom (as in the screen in Figure 3-24), two sets of column letters appear. Now that you have two windows on the screen you can jump between them with the Jump command (OA-J). When you press OA-J, the highlight bar moves from one window to the other.

Each window can scroll independently of the other. Or, if you would like them to scroll together, you may press OA-W again and choose Synchronized from the prompt line. If you want to go back to a one-window screen, press OA-W and choose One from the prompt line. Otherwise, *AppleWorks* saves your file with the two-window worksheet intact, so that when it is loaded again, the two windows are restored.

Printer Options

You can control certain parameters for printing your worksheet using the Printer Options command (OA-O) which takes you to the Printer Options screen. This command is virtually iden-tical to its counterpart in the Data Base. By typing a two-letter code and entering information, you can change the platen width; left, right, top, and bottom margins; number of charac-ters per inch; paper length; and number of lines per inch. You can also specify whether or not you want to send special printer codes or print a header. See "Printer Options" in the Data Base section in this chapter for more information on these codes and how they are entered.

Printing

AppleWorks calls a printed worksheet a *report.* When you are ready to print your report, press OA-P.

Figure 3-25. The Print Screen

```
File: Loan Analyzer                    PRINT            Escape: Review/Add/Change
================================================================================

                    The information that you identified
                    is 60 characters wide.

                    The Printer Options values allow
                    80 characters per line.


                    Where do you want to print the report?

                    1.  ImageWriter
                    2.  Custom
                    3.  The clipboard (for the Word Processor)
                    4.  A text (ASCII) file on disk
                    5.  A DIF (TM) file on disk



    ----------------------------------------------------------------------------


    Type number, or use arrows, then press Return                    40K Avail.
```

You are asked whether you want to print all of the work-sheet; rows; columns; or a block of cells. If you choose one of the latter three, highlight the portion of the worksheet that you want to print. *AppleWorks* then displays a menu of possible locations to print the report. You can choose to print the report to a printer, to the Clipboard, or to a text (ASCII) or *DIF* file on disk.

Printing to the Clipboard is used when you want to "paste" a report, or parts of it, into a Word Processor document. See "Using the Clipboard for Integration" for more information on this.

Printing to a text (ASCII) file on disk is necessary if you want to use your Spreadsheet file in another program, or if you want to transport it over communication lines. Printing to a *DIF* file on disk is useful if you want to transfer your worksheet to another database program or convert it to an *AppleWorks* Data Base file.

Figure 3-25 also shows information about how many characters wide the report is, and about the characters per line calculated in the Printer Options screen. Be sure that the characters-per-line value is larger than the width of your information. If it is not, *AppleWorks* either wraps the information to the next line or just cuts it off altogether. Increase the characters per line by opening the Printer Options screen (OA-O) and reducing the width of the left and right margins and/or increasing the characters-per-inch setting. If you can't increase the characters per line, you must print the report in sections.

When you are ready to print, choose the destination of the print and enter the date of the report to be used (in the header, if you have one). If you are printing to a printer, also enter the number of copies that you want. If you are printing to a text or *DIF* file on a disk, you also need to provide a ProDOS pathname.

When the file is being printed—either to the disk or to the printer, but not to the Clipboard—you can stop the printing and return to Report Format by pressing Escape. If you would like to pause the printing, press the space bar; to continue printing, press it again. When the printing is complete, you are returned to the Report Format screen.

Saving

You save your file at any time from the Spreadsheet with the Save command (OA-S). *AppleWorks* saves your file onto the current disk with the same filename that is noted at the top of the screen. Any Spreadsheet file with the same name is replaced without further verification, so be sure you want to replace any existing file with that name before executing Save. (During the saving process, however, *AppleWorks* gives you one last chance to change your mind. For a few seconds during the beginning of the save, you can press Escape to cancel the save and return to Review/Add/Change. But remember, you only have a few seconds to cancel, so think before you execute the Save command.)

To save the file under another name, change the filename with the Change Name command (OA-N).

You may also save your Spreadsheet file from the Main Menu by choosing either option 3, Save Desktop files to disk, or option 6, Quit. In fact, it is probably safer to save your file from the Main Menu, since there, you are required to verify that you want the file to replace any existing file on disk with that name.

Saving is important. Power failures, glitches, human error, or even program error can cause you to lose valuable, unsaved data. To avoid the frustration and wasted time of such losses, it is best to save your files frequently.

Using the Clipboard for Integration

Before *AppleWorks* came along, sharing information between two or more application programs was difficult, if not impossible. First you had to be sure the different applications had features that allowed you to share information. If they did, not only did you have to learn the different commands for each application, you also had to quit one before you could start up another. With all of these drawbacks, most people resorted to either typing the information twice or cutting and pasting their printed outputs together by hand. Then came *AppleWorks,* and the power of integration was achieved rather easily. Not only are all three of the most commonly used computer applications put into one program, but their commands are very similar, so sharing information between them is a snap. To further enhance the integration capabilities, Apple has incorporated a powerful Mail Merge feature starting with version 2.0 of *Apple-Works*. This new feature allows you to create multiple form letters or documents with information from a Data Base file.

The three applications of *AppleWorks*—the Word Processor, the Data Base, and the Spreadsheet—are integrated by the Desktop and the Clipboard. The Desktop is the place in memory where you store up to 12 *AppleWorks* files that you are currently working on. The Clipboard, which is "on" the Desktop, is the place where you temporarily store a piece of information that you want to put into another file. The contents of the Clipboard stay intact until you put something else there, move the contents into a file with the Move command, or turn off the computer.

To get information from one file to another, first you put the information on the Clipboard, then you switch files, and lastly you take the information off the Clipboard and put it wherever you like in your document. You can transfer information in this way between files of the same type, or from Data Base or Spreadsheet files to Word Processor files. You cannot use the Clipboard to transfer information directly between Data Base and Spreadsheet files, nor can you use it to transfer information from the Word Processor to either one of these. There are ways to make these kinds of transfers, but you must store the information on *DIF* or ASCII files first. For more information, see the section on integration in Chapter 6, "Power User Tips."

Transferring Information Between Files of the Same Type

This is a simple process. First be sure that both of the files are on the Desktop. This is done either by using option 1 of the Main Menu, Add files to the Desktop, or by creating a new file from scratch to be the receiving file. This is helpful if you want to make a new file that includes information from another file.

Be careful when transferring between two Data Base files, since the entries of the first file are blindly copied into the corresponding categories of the second file. If the categories do not match, the Clipboard entries are still transferred. For example, if the first file contains addresses in category 3, and the third category of the receiving file contains telephone numbers, the telephone number category will have addresses as entries after the transfer.

When transferring information between Spreadsheet files that contain formulas, *AppleWorks* treats these formulas in a special way. If you are copying or moving formulas that reference cells outside of the area that you are transferring, *AppleWorks* changes the formulas so that they reference cells in the new spreadsheet that are in the same relative positions as those in the original spreadsheet. This is called a *relative* move or copy. If you are copying or moving information that contains all of the cells that the formulas reference, *AppleWorks* gives you a choice between moving the formulas relatively

(choose Formulas & Values from the prompt line) or convert-
ing the formulas to values before moving or copying them into
the new Spreadsheet (choose Values Only from the prompt line).

Please note: Open Apple Commands, which require you
to press the Open Apple key and some other key simulta-
neously, are indicated in this book with the letters OA.

To transfer information between files of the same type
follow these steps:

1. Place the cursor at the beginning or end of the information
   that you want to transfer. (In the Data Base, be sure you are
   in multiple-record layout.)
2. Press OA-M (Move) or OA-C (Copy). Remember that Move
   deletes the information from your file and puts it on the
   Clipboard, while Copy duplicates your information.
3. Choose To Clipboard from the prompt line.
4. Highlight the information that you want to move or copy
   and press Return. If asked to verify (Spreadsheet only),
   choose Yes from the prompt line. The information is now
   on the Clipboard.
5. Switch to the file that you want to put the information in by
   using the Quick command (OA-Q).
6. Place the cursor where you want the new information.
7. Press OA-M (Move) or OA-C (Copy). Remember: Move de-
   letes the information from the Clipboard and puts it in a
   file; Copy puts a duplicate of the Clipboard in the receiving
   file.
8. Choose From Clipboard from the prompt line. If moving or
   copying information between Spreadsheet files, *AppleWorks*
   may ask you to choose Formulas & Values or Values Only
   from the prompt line. (See previous paragraph for explana-
   tion.) The information is now in your file.

Transferring Information from the Data Base or Spreadsheet to the Word Processor

The Word Processor can't interpret information from the Data
Base or formulas from the Spreadsheet; therefore, *AppleWorks*
will not let you move or copy information between files of
these applications the same way you move or copy files to and
from applications of the same type.

The Word Processor understands text only, so you must put files into text form before you can transfer information there. To do this, *AppleWorks* allows you to print Data Base and Spreadsheet reports to the Clipboard. When you print to the Clipboard—like printing to a printer—text is transferred, but the specific Data Base or Spreadsheet constraints otherwise present are not. Once you have the report in text form on the Clipboard, you can move or copy the information to a Word Processor document.

To transfer information from a Data Base or Spreadsheet file to a Word Processor file, follow these steps:

1. Be sure that both files are on the Desktop.
2. Format and print the Data Base or Spreadsheet report as you normally would, but choose to print to the Clipboard instead of to a file on disk or to a printer. The report is printed to the Clipboard as text.
3. Use the Quick command (OA-Q) to switch to the Word Processor file that you want to put the report in.
4. Place the cursor where you want the report pasted.
5. Press OA-M (Move) or OA-C (Copy). Remember that Move deletes the information from the Clipboard, while Copy duplicates the information on the Clipboard.
6. Choose From Clipboard from the prompt line.

The report is now in your Word Processor document, and you can edit it as you would any other text.

How to Use Mail Merge (*AppleWorks* Version 2.0 only)

You can integrate data from a Data Base file into a document in the Word Processor using the unique Mail Merge feature. You can personalize form letters with a person's name and address, create monthly reports using data compiled in the Data Base, or even print invoices. You can also use Mail Merge to customize reports that can't be produced using report formats in the Data Base. Moreover, the Mail Merge feature is not limited to form letters. Whatever categories you have in your Data Base can be included in a series of documents in the Word Processor. After you have selected the records to be included in the mail merge, customize the document to include

the desired record categories and initiate the print. *AppleWorks* prints each document with the Data Base categories in place. Although Mail Merge is not difficult to use, you must follow a few key steps to be successful:

1. Create a new Data Base or load an already existing Data Base file with the information that you want to contain in your Mail Merge document.
2. Press OA-P to see the Report menu. Choose to create a new tables report format, or load one that you have already created.
3. At the Report Format screen, use the Delete command (OA-D) to delete any categories that are not going to be used in the Mail Merge document (so that the Clipboard will not run out of space once your records are transferred there).
4. Use the Record selection command (OA-R) to select the records that you want to use in the merge. (The number of records dictates the number of documents to be printed in the Word Processor.) Also, use the Arrange command (OA-A) to arrange the records in the order you want the documents printed.
5. Print the report to the Clipboard (select "for Mail Merge" from the prompt line) using the Print command (OA-P). Never use Move (OA-M) or Copy (OA-C) to put data on the Clipboard for Mail Merge, and, once you have printed to the Clipboard, do not use the Clipboard to hold anything else, or your data will be lost. *AppleWorks* displays a message telling you that the Mail Merge data is now on the Clipboard.
6. Create a new Word Processor document or load an already existing one that will contain the Mail Merge data.
7. Place the cursor in your Word Processor document where you want a Data Base entry to appear. Embed the printer option MM (for Mail Merge) by going to the Printer Option menu (OA-O), typing MM, and choosing the available Data Base category that you want printed there. After you choose the category, *AppleWorks* asks whether you want to erase the line of text if no entry exists (in case the chosen category contains no data in some records). The category name

appears in your document in brackets, prefixed with a caret, (for example, ^<Address>). Repeat this step until all of the categories that you want to include are embedded in their proper places. (Note: You can have as many Mail Merge categories on a line as will fit. *AppleWorks* adds a single space after each Mail Merge category.) You can edit your document as much as you like, but be sure not to corrupt any Mail Merge embedded options.

Like all printer options, use Delete and OA-D to delete Mail Merge embedded options, but be sure to erase the whole option including the category name, the brackets, and the caret.

8. When you are satisfied with the document, print it as you normally would using the print command (OA-P). *Apple-Works* asks you whether you want to merge the Data Base items with the document, or if you'd rather just print the document without merging. Choose the latter option if you want to preview how your printouts will look. If you choose to merge the data, *AppleWorks* prints the document for each record, substituting the category entries wherever the Mail Merge printer options are. If *AppleWorks* displays a message that says there is not any Mail Merge data on the Clipboard, then you must have used the Clipboard for something else after you printed the data there. Repeat steps 1–6 and 8 again.

To see these Mail Merge procedures applied to a sample form letter, see Chapter 7.

How to Set Up Your Printer

Undoubtedly one of the most frustrating things about using personal computer software is printing. Most of the time, the problems that you encounter are related to the way your computer sends information to the printer. *AppleWorks* has features to insure that it sends correct information to your printer, but first you need to set up, or *configure*, your printer for *Apple-Works*.

Configuring Your Printer for *AppleWorks*

Step 1. Be sure that your printer is correctly connected to your computer. Your computer and printer manuals should be able to help you do this. If your connection is still questionable, seek professional advice from your local computer dealer.

Step 2. Be sure that the switches on your printer, and your printer card (if you have one), are set correctly. These switches, sometimes called DIP switches, establish the normal settings for the hardware. Your printer and printer-card manuals should help you set these switches correctly.

Step 3. You need to tell *AppleWorks* what type of printer you are using, and you need to specify any special settings related to your printer. Use option 7, Specify information about your printer(s), on the Other Activities menu to configure your *AppleWorks* program for your printer. If you never change the printer you use, you only need to configure your printer once after you purchase *AppleWorks*. The printer specifications you set are stored on the program disk, so each time you start up the program, *AppleWorks* "knows" which printer you are using.

Step 4. Before executing any print commands, be sure that the printer is turned on and is ready to print (selected or on-line).

Specifying Information about Your Printer

Every printer is different, so *AppleWorks* prints differently, depending on what type of printer you have. *AppleWorks* knows how to talk to 12 different types of printers; all you have to do is tell it which one you have. If you don't have one of the standard 12 (or one that you know is compatible with one of these 12), all is not lost. *AppleWorks* allows you to specify special information about your custom printer.
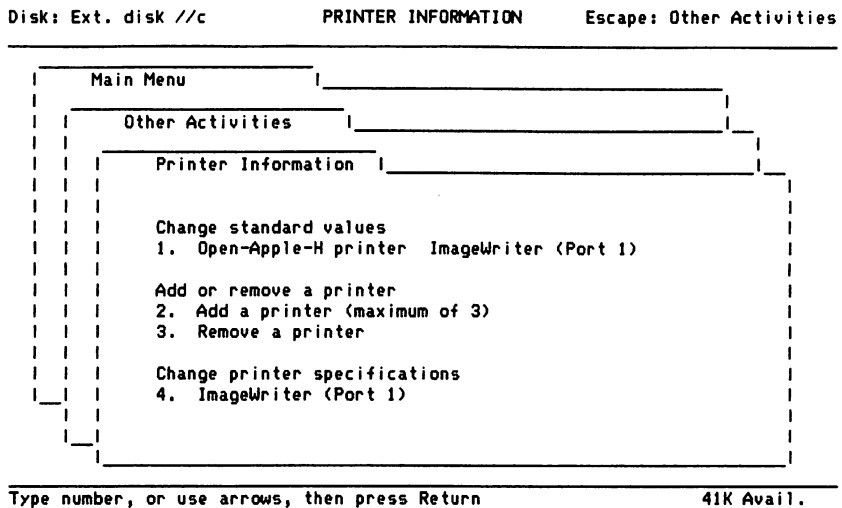
 AppleWorks assumes that you are using an ImageWriter or ImageWriter II printer and that it is connected to either slot 1 or port 1 of your computer. If these conditions apply, you don't need to specify anything about your printer, but you still may want to scan the following, for future reference.

Adding a Printer

AppleWorks allows you to have up to three different printers activated at any time. Having more than one may be necessary if, for instance, you use a printer at the office that is different from the one at home, or you have two different printers connected to your computer. When you use the Print command (OA-P) in one of *AppleWorks'* applications, you are shown a list of currently activated printer destinations. Choose where to print the document from this list.

To activate a new printer in *AppleWorks* you need to add it to the list of current printers. First choose option 5, Other Activities, from the Main Menu; then choose option 7, Specify information about your printer(s), from the Other Activities menu. You now see the Printer Information menu.

Figure 3-26. Printer Information Screen

```
Disk: Ext. disk //c          PRINTER INFORMATION      Escape: Other Activities
_____

  I     Main Menu             I_____
  I    _____  I                                   I
  I   I   Other Activities    I_____I__
  I   I  _____    I                                   I  I
  I   I I  Printer Information I_____I__
  I   I I                                                            I
  I   I I                                                            I
  I   I I   Change standard values                                   I
  I   I I   1.  Open-Apple-H printer   ImageWriter (Port 1)          I
  I   I I                                                            I
  I   I I   Add or remove a printer                                  I
  I   I I   2.  Add a printer (maximum of 3)                         I
  I   I I   3.  Remove a printer                                     I
  I   I I                                                            I
  I   I I   Change printer specifications                            I
  I__I I   4.  ImageWriter (Port 1)                                  I
     I  I                                                            I
    I_I  I                                                           I
       I_____I

Type number, or use arrows, then press Return                41K Avail.
```

Choose 2, Add a printer, from this menu. A list of 12 possible printers is displayed, including 5 Apple printers, 4 Epson printers, 2 Qume printers, and, in case you own none of these, a Custom Printer option (see Figure 3-27).

Choose the appropriate printer from the list and give the printer a name (which can be anything which makes sense to

Figure 3-27. Adding a Printer Menu Screen

```
Disk: Ext. disk //c            ADD A PRINTER    Escape: Printer Information
```

```
I    Main Menu           I_____
I    _____   I                              I
I  I    Other Activities    I_____I__
I  I  _____   I                               I
I  I  I  Printer Information  I_____I__
I  I  I  _____    I                              I
I  I  I  I  Add a Printer      I_____I__
I  I  I  I  Identify your printer, or a compatible series          I
I  I  I  I                                                   I
I  I  I  I  1.  Apple Dot Matrix      9.  Qume Sprint 5       I
I  I  I  I  2.  Apple ImageWriter    10.  Qume Sprint 11      I
I  I  I  I  3.  Apple Daisy Wheel    11.  Apple Scribe        I
I  I  I  I  4.  Apple Silentype      12.  Custom printer      I
I  I  I  I                                                   I
I  I  I  I  5.  Epson MX series                               I
I__I  I  I  6.  Epson MX/Graftrax+                            I
   I  I  I  7.  Epson RX series                               I
  I__I  I  8.  Epson FX series                               I
    I__I_____I
```

```
Type number, or use arrows, then press Return          41K Avail.
```

you.) You will give a name to each printer you add, whether or not just a custom printer. *AppleWorks* now asks you how the printer is accessed, that is, which internal slot your printer card is in, or the port that your printer cable is connected to. Normally your printer is connected to Port 1 or to a printer card that is in Slot 1. Either way, *AppleWorks* lists all possibilities along with a final option to print to a disk or to another Apple computer. You can choose the latter option if you want to store your printout as a file on disk. This printout file can be used in another program and can be sent over communication lines. Remember that if you use the Print-to-disk option, *AppleWorks* formats the document just as if it were printed on the printer that you are adding.

Setting Printer Specifications

Now that you have specified the printer type, the printer name, and the way the printer is accessed, *AppleWorks* allows you to change a variety of printer specifications (see Figure 3-28).

These printer specifications control formatting and paper-handling parameters used by your printer. You generally do not need to change any of these values unless you have a

Figure 3-28. Printer Specification Screen

```
Disk: Ext. disk //c          ADD A PRINTER     Escape: Printer Information
_____

 I       Main Menu        I_____
 I     _____                                      I
 I    I     Other Activities    I_____I__
 I    I   _____                                   I
 I    I  I   Printer Information  I_____I__
 I    I  I  _____                                 I
 I    I  I I    Add a Printer        I_____I__
 I    I  I I                                                      I
 I    I  I I   Printer name: Custom1 (Port 1)                     I
 I    I  I I                                                      I
 I    I  I I   Printer type: Custom printer                       I
 I    I  I I                                                      I
 I    I  I I   1.  Needs line feed after each Return     No       I
 I    I  I I   2.  Accepts top-of-page commands          No       I
 I    I  I I   3.  Stop at end of each page              No       I
 I__I  I I   4.  Platen width                         8.0 inches  I
  ___I  I I   5.  Printer codes                                    I
     I_I I                                                         I
       I_I_____I
_____
Type number, or use arrows, then press Return                41K Avail.
```

custom printer or special printing needs. *AppleWorks* sets de-
fault values for all of these options. If you're not sure what an
option does, don't change it.

The first option specifies whether the printer needs a line
feed after each carriage return. When printing a Return charac-
ter, most printers return the printer head to the left margin
and issue a line feed to advance the paper one line. This guar-
antees that the printing starts on the next line. If your printer
does not issue a line feed for every carriage return, set this op-
tion to Yes. If you set this option incorrectly, you will get
either an extra line between each line of your document, or all
of your text will be printed on the same line.

The second option is most always set to Yes. It tells
AppleWorks whether your printer can accept top-of-page com-
mands. A top-of-page command (sometimes called a form
feed) tells the printer to advance the paper to the top of the
next page. Your printer manual should tell you whether your
printer can accept top-of-page commands. Set this option to
No if you don't want *AppleWorks* to issue top-of-page com-
mands—an especially wise choice when printing on mailing
labels.

The third option allows you to pause printing at the end of every page in your document. You may want to set this to Yes if you always print on cut-sheet paper.

The fourth option on the Add a Printer menu tells *Apple-Works* what the platen width of your printer is. This is the maximum width, in inches, that the printer can print. The platen width is used by *AppleWorks* to calculate how many characters can be printed on one line. It is best to set this option to the true platen width of your printer, but if you will be printing on paper narrower than your platen width, you can set this to a lesser value.

The fifth option is only displayed if you are using both a printer interface card in one of your internal slots and an Apple IIe or IIGS. This option allows you to send special printer codes to your card to initialize it for printing. Apple printer cards (such as the Apple Parallel Interface or the Super Serial Card) expect the printer control characters code Control-I 80N, so this is set as the default. If you have a non-Apple printer interface card, you need to consult your manual to determine what the initialization code should be. Entering this code is different than making a standard text entry in *AppleWorks*. Printer codes can include any character found on the keyboard (except ˆ), including the arrow, Return, Delete, and Escape keys. All of these keypresses are interpreted as part of the control character code. If you make a mistake entering the code, start over and enter it again instead of using the Delete or Escape keys. When your code is correctly entered, press SHIFT-6 (ˆ) to accept it.

The last option, Printer codes, is only present if you are adding a custom printer.

Custom Printer Codes

Your printer can be thought of as a computer itself. It requires commands to control the way it prints your document. Character pitch, vertical line spacing, boldface, subscript, superscript, and underlined text all require special commands. *AppleWorks* already knows the printer codes controlling these features for the 11 standard types of printers found on the Add Printer menu (see figure 3-27 above), but when using a

custom printer, you must manually enter the ASCII codes that your particular printer needs to perform these commands. It is best to set all of the printer codes for your custom printer at one time, as the task requires locating foreign codes in your printer manual and translating them into ASCII (American Standard Code for Information Interchange) in order for *AppleWorks* to understand them.

These codes are usually listed in a table in an appendix to the manual. Tables usually list the printer codes in a variety of ways: in ASCII, decimal, or hexadecimal. You should look for the ASCII codes since this is what you enter into *AppleWorks*. If the table in your manual does not include the ASCII codes, you have to convert the decimal or hexadecimal values using an ASCII conversion chart. Your printer manual probably has one of these, but, if it doesn't, consult your computer's reference manual or obtain a conversion chart from your dealer.

As with printer interface codes discussed above, when entering the code, remember not to use the arrow, Return, Delete, or Escape keys unless they're part of the code itself. All of these characters are interpreted as part of the printer code. Press SHIFT-6 (ˆ) to confirm your entry.

To set the printer codes for your printer, choose Printer codes, option 5 on the Add a Printer specifications menu. The Printer Codes menu (Figure 3-29) displays four or five options, depending upon your use of serial-port cable connections.

The first option, Characters per inch, controls the character pitches for your printer. Many printers offer a number of different character widths, and *AppleWorks* allows you to set a code for each value, from 4 to 24 characters per inch. When you print out your documents in the Word Processor, the Data Base, or the Spreadsheet, you can set the characters-per-inch setting to any value that you have set a code for. To set the printer code for each characters-per-inch value, first enter the number value of the characters per inch; then enter the printer code that commands your printer to turn on that value. Repeat the procedure until you have defined all of the character-per-inch printer codes that your printer can handle.

Figure 3-29. Printer Codes Menu

```
Disk: Ext. disk //c          PRINTER CODES          Escape: Add a Printer
 _____
| Main Menu              |_____
|  _____                 |
| | Other Activities      |_____|_
| |  _____| |
| | | Printer Information  |_____|_
| | |  _____                          | |
| | | | Printer codes        |_____|_
| | | |  _____|
| | | | 1.  Characters per inch                                     |
| | | |                                                             |
| | | | 2.  Lines per inch                                          |
| | | |                                                             |
| | | | 3.  Boldface, Subscript and Superscript                     |
| | | |                                                             |
| |_| | 4.  Underlining                                             |
|_| | |                                                             |
  |_| | 5.  Serial Interface settings                               |
   |_| |_____|
 _____
Type number, or use arrows, then press Return              53K Avail.
```
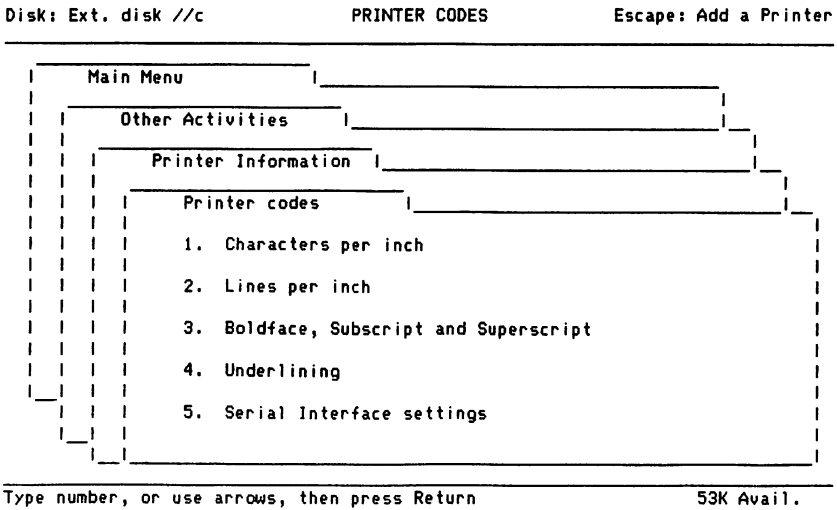
The second option, Lines per inch, allows printing in a six or an eight lines-per-inch format, controlling the spacing between each printed line. If you set both these codes, you'll later be able to choose either setting when printing out documents from the Word Processor, Data Base, or Spreadsheet.

The third option on the Printer Codes menu gives you the choice of using either boldface type, subscripts, or superscripts. Each of these special types of text printing requires one code to begin the enhancement and one to end it. Be sure to enter a code for each. These enhancements are only available when printing from the Word Processor. *Boldface* is when your printer emphasizes the text; *subscript* is when it prints characters below the normal line; *superscript* is when it prints characters above the normal line.

Underlining is the fourth option on the Printer Codes menu. When you choose this option you see the underlining menu shown in Figure 3-30.

Figure 3-30. Underlining Menu

```
Disk: Ext. disk //c              UNDERLINING          Escape: Printer codes
_____
  I     Main Menu            I_____
  I    _____      I                                       I
  I   I    Other Activities     I_____I_
  I   I  _____       I                                     I
  I   I I   Printer Information  I_____I_
  I   I I  _____      I                                      I
  I   I I I   Underlining        I_____I_
  I   I I I _____                                     I
  I   I I I  1.  Don't attempt underlining                               I
  I   I I I                                                              I
  I   I I I  2.  Printer has start/stop underline commands               I
  I   I I I                                                              I
  I   I I I  3.  Print character, backspace, underline                   I
  I   I I I                                                              I
  I_  I I I  4.  Print line, carriage return, print underline            I
   I_ I I I                                                              I
    I_I I                                                                I
     I_I I_____I

Type number, or use arrows, then press Return              41K Avail.
```

Choose the first option—Don't attempt underlining—if
you don't want to underline text in the Word Processor. If you
do want to underline text, choose one of the three remaining
options. Option 2—Printer has start/stop underline com-
mands—should be chosen if your printer has commands to
begin and end underlining. If you choose this option, enter the
printer codes. Choose option 3—Print character, backspace,
underline—if your printer doesn't have begin and end com-
mands but does have the ability to backspace one character.
Choose option 4—Print line, carriage return, print underline—
if you can't use option 2 or 3.

If you're using a serial port to connect your computer
with your printer, you'll have a fifth option on your Printer
Codes menu. Choosing this option allows you to set the serial
interface settings for your serial port. Your serial printer ex-
pects data from the computer to be sent in a specific way.
There are three settings that have to be correct before your
printer will print accurately: baud rate, data format, and parity.
Consult your printer manual to see how your printer expects
to receive data.

Sometimes your printer will not be able to perform one or more of the coded formatting options. If this is the case for your printer, leave the printer code set to None and make the most of your remaining formatting options.

Open Apple-H Printer

Open Apple-H printer on the Printer Information menu is one out of the three printers that you can have attached, which is used to print a hard copy of the screen when you use the Hard Copy command (OA-H). To make a hard copy of the screen display, use the OA-H command; this will make a hard copy on the designated printer.

Removing a Printer

You can have a maximum of three printers on your list of current printers in *AppleWorks*. To remove a printer from this list, choose the third option from the Printer Information menu; a list of your printers will be displayed. Select the printer that you want removed and press Return.

If this printer was set as the OA-H printer, you will need to reset it to another printer before you can use the OA-H command.

Changing Printer Specifications

Once you have added printers to your list of *AppleWorks'* current printers, you can change their specifications at any time. Change a printer's specifications by choosing that printer when you're viewing the Change printer specifications option on the Printer Information menu.

Chapter 4
Command Summary

Chapter 4
Command Summary

You communicate with *AppleWorks* via commands. All of the commands for *AppleWorks* are initiated by pressing a single key, a sequence of keys, or a key in combination with other keys. The commands can be divided into three categories: *General, Cursor Movement,* and *Application.* General commands are used in the same way throughout the three *AppleWorks* applications, yielding the same results in each one. Cursor Movement and Application commands can also be executed in the same way throughout the three applications, but these commands may yield different results in each application.

In the following command descriptions, both the command names and their associated keypresses are given. Many commands require you to press the Control key or the Open Apple key (indicated with the letters OA)—the nonshaded apple key to the left of the space bar—while simultaneously pressing another key. Commands of this type are signified by a hyphen. For example, OA-S indicates that you press the Open Apple key and the S key simultaneously.

General Commands

The following command summaries cover the keypress functions used to execute the wizardry of *AppleWorks*—the remarkable workhorse features with which to make optimum use of the three applications. The first ten commands in the summary are General commands; the remaining ones are Cursor Movement and Application commands.

| **Help** | **OA-?** |

Press OA-? to display the Help window. Help is available at the Main Menu and in each of the three applications. Help lists the commands that are available to you at any particular time, and it gives you any other pertinent information. Use the up- and down-arrow keys to scroll through the Help text.

Escape   Esc

Press the Escape key to back out of what you are doing. This is used to back up to the previous activity or to cancel the current entry. If you are typing in a response to a prompt, Escape will erase it. A message in the upper right corner of the screen shows you what Escape will do if pressed—either cancel your response or return you to another part of the program.

Return   Return

Press Return to accept an entry, select a menu option, or start a process. Return is used to tell *AppleWorks* that you are ready for it to work on what you have typed or selected. Refer to the Application Commands section for specific uses of Return in each application.

Delete   Delete

Press Delete to erase the character to the left of the cursor. If nothing is to the left of the cursor or if there is no cursor on the screen, Delete delivers a beep tone.

Clear   OA-Y or Control-Y

Press OA-Y or Control-Y to erase everything from the cursor to the end of the line or entry. This is a handy command for making quick deletions in the prompt line.

Edit   OA-E

Press OA-E to change the cursor from a flashing underline to a flashing block and vice versa. A flashing underline signifies that you are in insert mode, in which the character under the cursor and all characters to the right of it are moved to the right when characters are entered. A flashing block, on the other hand, indicates that you are in overstrike mode, in which characters under the cursor are replaced with new ones as you type.

Hard Copy   OA-H

A hard copy of the screen can be sent to your printer by pressing OA-H. This feature can be used to print a list of files

that may be on the screen, a part of a Word Processor document, a record from the Data Base, or a section of a Spreadsheet. Keep this one in mind; you'll find many uses for it.

Quick Change   OA-Q

Press OA-Q to display the Desktop Index, which contains all of the files that are currently on the Desktop. This command is available everywhere in *AppleWorks*. From this index, you can choose which file to work on for the moment. With the Quick Change command, you can switch from one application to another without going to the Main Menu.

The Desktop can hold up to 12 files at a time, but it is also constrained by memory. That means 12 files can be present only if there is enough memory to hold the contents of them all.

Save   OA-S

Whenever you are in one of the *AppleWorks* applications, you can quickly save your file to disk by pressing OA-S. This command saves your file to the disk location currently noted at the top of your screen, and it replaces any previously saved version with the same filename. It is important to save your file often since the Desktop is only a temporary storage area—it lasts as long as your computer is on. You can also save your file using the Main Menu option, Save Desktop files to disk. See "Using the Desktop," in Chapter 3.

Restart   Control-OA-Reset

The computer is equipped with a keypress combination that will restart *AppleWorks*—or any other program, for that matter. To restart *AppleWorks*, be sure your 5¼-inch Startup disk, or your 3½-inch Startup/Program/Sample Files disk is in your main drive, and then press Control-OA-Reset.

Cursor Movement Commands

Cursor movement is a vital part of the operation of *Apple-Works*. Becoming familiar with these commands aids you in the mastery of the art of "AppleWorking." Although you will

find that the cursor moves virtually in the same manner in the three applications, pay close attention to its subtle differences, as outlined in this section. The highlight bar is a term used when describing the commands in the Spreadsheet. It is the Spreadsheet's equivalent of a cursor, but rather than referring to just one character, it refers to one cell in the Spreadsheet.

Each command is presented with the command name and its associated keypress above descriptions of how the keypress will behave in each individual application. Remember that the effect of a keypress may be different in each application (Word Processor, Data Base, or Spreadsheet).

Cursor Left ← and OA-←

Word Processor Cursor Left

Pressing the left-arrow key moves the cursor one character to the left in your document, while OA-← moves the cursor one word to the left.

Data Base Cursor Left and Change Size of Category

The left-arrow key moves the cursor to the left one character, except when you are at either the Change Layout screen for multiple-record layout or the Report Format screen for table reports; in these cases, it moves the cursor to the left one category. OA-← only has meaning in the Change Layout and the Report Format screens. At the Report Format screen for table reports and the Change Layout screen for multiple-record layout, pressing OA-← increases the width of the category that the cursor is on by one character. At both the Report Format screen for label reports and the Change Layout screen for single-record layout, pressing OA-← moves the category to the left one character. Be sure the cursor is on the first character of the category when executing this command.

Spreadsheet Highlight Bar Left and Change Column Width

Pressing the left-arrow key in the Spreadsheet moves the highlight bar left one cell, while pressing OA-← moves the highlight bar left one screenful of cells. When you are changing the width of the columns with the OA-L and OA-V commands, pressing OA-← decreases the width of the column or columns by one character.

Cursor Right → and OA-→

Word Processor **Cursor Right**

Pressing the right-arrow key moves the cursor to the right one character, while OA-→ moves the cursor to the right one word.

Data Base **Cursor Right and Change Size of Category**

The right-arrow key moves the cursor to the right one character, except when you are at either the Change Layout screen for multiple-record layout or the Report Format screen for table reports, in which it moves the cursor to the right one category. OA-→ only has meaning in the Report Format and the Change Layout screens. At the Report Format screen for table reports and at the Change Layout screen for multiple-record layout, pressing OA-→ decreases the width of the category that the cursor is on by one character. At the Report Format screen for label reports or the Change Layout screen for single-record layout, pressing OA-→ moves the category to the right one character. Be sure the cursor is on the first character of the category to execute this command.

Spreadsheet **Highlight Bar Right**

Pressing the right-arrow key in the Spreadsheet moves the highlight bar right one cell, while pressing OA-→ moves the highlight bar right one screenful of cells. When you are changing the width of the columns with the OA-L and OA-V commands, pressing OA-→ increases the width of the column or columns by one character.

Cursor Down ↓ and OA-↓

Word Processor **Cursor Down**

Pressing the down-arrow key in the Word Processor moves the cursor down one line, while pressing OA-↓ moves the cursor down one screenful of lines (20 lines).

Data Base **Cursor Down**

Pressing either the down-arrow key or OA-↓ in the Data Base has different results, depending upon which layout the Data Base is in. If it is in single-record layout, pressing the down-arrow key moves the cursor down one category in the record currently displayed. If the cursor is on the last category of the

record, the cursor moves to the first category of the next record. Pressing OA-↓ in single-record layout moves the cursor to the same category of the next record.

If the Data Base is in multiple-record layout, pressing the down-arrow key moves the cursor to the same category of the record in the line below, while OA-↓ moves the cursor to the same category at the bottom of the current screen; or, if it is already at the bottom, it moves it to the bottom of the next screen of records.

Spreadsheet **Highlight Bar Down**

Pressing the down-arrow key in the Spreadsheet moves the highlight bar down one cell. OA-↓ moves the highlight bar to the bottom of the current screen, or, if it is already at the bottom, it moves it to the bottom of the next screen.

Cursor Up ↑ and OA-↑

Word Processor **Cursor Up**

Pressing the up-arrow key when working in the Word Processor moves the cursor up one line, while pressing OA-↑ moves the cursor up one screenful of lines (20 lines).

Data Base **Cursor Up**

Pressing the up-arrow key or OA-↑ in the Data Base has different results, depending on which layout the Data Base is in. If the Data Base is in single-record layout, pressing the up-arrow key moves the cursor up one category in the record displayed. If the cursor is on the first category of the record, the cursor moves to the last category of the previous record. Pressing OA-↑ in single-record layout moves the cursor to the same category of the previous record.

If the Data Base is in multiple-record layout, pressing the up-arrow key moves the cursor to the same category of the record in the line above, while OA-↑ moves the cursor to the top of the current screen or—if it is already at the top—to the top of the previous screenful of records.

Spreadsheet **Highlight Bar Up**

Pressing the up-arrow key in the Spreadsheet moves the highlight bar up one cell, while pressing OA-↑ moves the highlight

bar to the top of the current screen or—if it is already at the top—to the top of the previous screen.

Ruler   OA-1 through OA-9

Word Processor   **Relative Move**

You can move the cursor to relative positions in your document using the ruler command (OA-1 through OA-9). Pressing OA-1 moves the cursor to the beginning of your document, while OA-9 moves it to the end. Pressing the other commands in this series, OA-2 through OA-8, moves the cursor to relative positions within your document.

Data Base   **Relative Move**

You can move the cursor to relative positions in your Data Base file by using the ruler command (OA-1 through OA-9). Pressing OA-1 moves the cursor to the first record of your Data Base file, while OA-9 moves it to the last. OA-2 through OA-8 moves the cursor to relative positions within your Data Base file.

Spreadsheet   **Relative Move**

You can move the cursor vertically to relative positions in your worksheet using the ruler command (OA-1 through OA-9). Pressing OA-1 moves the cursor to the first row of your worksheet, while OA-9 moves it to the last. OA-2 through OA-8 moves the cursor to relative positions within your worksheet. The highest numbered row in your worksheet with an entry is considered the end of your worksheet.

Tab Left and Tab Right   Tab and OA-Tab

Word Processor   **Tab Right and Tab Left**

Pressing Tab while in the Word Processor moves the cursor to the next tab stop which is indicated by vertical bars in the second line of the screen, while OA-Tab moves the cursor to the previous tab stop. You can change the tab stop settings using the OA-T command.

Data Base   **Category Right and Category Left**

In the Data Base, pressing Tab moves the cursor to the next category of the current record. If the cursor is on the last

category for the current record, it moves the cursor to the first category of the next record. Pressing OA-Tab moves the cursor to the previous category of the current record, or, if the cursor is on the first category of the current record, it moves the cursor to the last category of the previous record. If you are at the Report Format screen for table reports, Tab and OA-Tab operate exactly like the right-arrow and left-arrow commands.

Spreadsheet   Highlight Bar Right and Highlight Bar Left
Tab and OA-Tab in the Spreadsheet operate exactly like right arrow and left arrow, respectively.

Application Commands

Application commands are commands that only have meaning when you are working in one of the three applications in *AppleWorks;* they do not work in the Clipboard or on the Desktop. Many of these commands are used in all three applications—you don't have to remember three different sets of commands—but because each application is so different, some commands may perform differently in the different applications. Other Application commands are specific to one application and have no meaning in the other two. This section lists each command and gives a brief explanation of its use in each of the applications or notes when it does not apply.

First the command is named with its keypresses; then its actions are discussed for each of *AppleWorks'* three applications. If the command is not available in the application, Not Applicable is printed.

Arrange	OA-A
Word Processor	Not Applicable
Data Base	Arrange Category

You can arrange or sort your Data Base using any of the categories that you have set up. For instance, if one of your categories is a telephone number, you could arrange your list in order of ascending prefixes. Move the cursor to the category by pressing Tab (to move forward) or OA-Tab (to move backward). Press OA-A to display the Arrangement order menu.

From this menu you can choose which ordering rule to use for the category indicated. There are four different standard ways to order your database: alphabetically from A to Z, reverse alphabetically from Z to A, numerically from 0 to 9, reverse numerically from 9 to 0. If your category is a standard date or time—that is, it is named "date" or "time"—you can arrange your database chronologically, or reverse chronologically. This command is available from either the Add/ Review/Change or the Report Format screen.

Spreadsheet   **Arrange Rows**

To arrange the rows of your worksheet by entries in one column, first place the highlight bar in the column you desire and then press OA-A. Highlight the rows to be sorted and press Return. You must highlight at least two rows to continue. There are four different ways you can arrange the rows, based on the entry of the column you choose. You can arrange by labels alphabetically (A to Z) or reverse alphabetically (Z to A), or by values numerically (0 to 9) or reverse numerically (9 to 0).

Blank Out   OA-B

Word Processor   Not Applicable

Data Base   Not Applicable

Spreadsheet   **Blank Out Cells**

To erase the contents of a cell or a group of cells, press OA-B. You are given a choice to blank out the current entry, rows of cells, columns of cells, or a block of cells. Select one and press Return; then select the cells that you would like cleared and press Return again. If any of the cells that you choose are protected, a prompt asks you to verify the action.

Copy   OA-C

Word Processor   Copy Text

You can copy text within the Word Processor or to or from the Clipboard. Whenever you use the copy command, the text that you are copying remains in place as you take a duplicate of it

somewhere else. The maximum number of lines that can be copied is 250.

To copy text within a Word Processor document, place the cursor at the beginning or end of the text that you want to copy and press OA-C. From the prompt line, choose Within document. Then highlight the text that you want to copy and press Return. Move the cursor to the place where you want to restore the copy of the text and press Return again.

To copy text to the Clipboard, place the cursor at the beginning or end of the text that you want to copy and press OA-C. Choose To Clipboard from the prompt line; then highlight the text that you want to copy and press Return. A copy of the text is now on the Clipboard, and can be copied or moved to another Word Processor document.

To copy text from the Clipboard into a Word Processor document, place the cursor where you want the Clipboard contents and press OA-C. Choose From Clipboard from the prompt line. A copy of whatever was on the Clipboard is copied into your document, not affecting the contents of the Clipboard. The message *The Clipboard is empty* is displayed if there is nothing on the Clipboard. If there are Data Base records or Spreadsheet cells on the Clipboard, *AppleWorks* does not let you copy these to your Word Processor document, unless you use the OA-P command to print the information to the Clipboard.

Data Base   **Copy Records**
In the Data Base, you can both copy records from or to the Clipboard and make multiple copies of a single record within a file.

To make multiple copies of a single record within a file, place the cursor on the record and press OA-C. If you are in multiple-record layout, choose the prompt-line option, Current record; if you are in single-record layout, it is chosen for you. You now may enter the number of copies you want. After you press Return, exact copies of the record are added to your Data Base.

To copy records from your Data Base to the Clipboard, you first need to be in multiple-record layout. If you're not,

press OA-Z to zoom there. Place the cursor at the first or last record of the record range that you want to copy; then press OA-C. Choose To Clipboard from the prompt line and press Return. You may now highlight the records that you want to copy. When you have highlighted the desired records, press Return. An exact copy of the range of records is now on the Clipboard. You may now copy or move these records to the same or another Data Base file.

To copy records to your Data Base from the Clipboard, once again make sure you're in multiple-record layout; to zoom there, press OA-Z. Place the cursor after the place you want the contents of the Clipboard to go and then press OA-C. Choose From Clipboard from the prompt line and press Return. An exact copy of the range of records from the Clipboard is now copied to your file. If there are no records or if the information on the Clipboard is not Data Base information, an error message is displayed and no copy is made.

Spreadsheet   **Copy Cells**
In the Spreadsheet, you can copy a range of cells to another place within the worksheet or to or from the Clipboard.

To copy cells within a worksheet, place the highlight bar at the beginning or end of the range of cells and press OA-C. From the prompt line, choose Within Worksheet and press Return. You may now highlight adjacent cells either vertically or horizontally to define the Source of your move. (The prompt line refers to these originally selected cells as your *Source.*) *AppleWorks* only lets you select cells within one row or column. When you have finished the selection, press Return. To copy the selection directly into a range of cells, place the highlight bar in the top left cell of the destination range, and then press Return. If you type a period, you may preview the destination of your copy. By entering a period, you may also select more than one Destination for the copy, although the destinations must be adjacent to each other. After you have selected the proper destination, press Return. *AppleWorks* now attempts to place a copy of the Source in the Destination. The copied information replaces rather than displaces your original data.

If a pointer (a reference to a particular cell in the

Spreadsheet file) is found in one of the Source cells, *Apple-Works* requires you to make a decision as to whether you would like to make a relative copy of the pointer or just copy the pointer directly without changing it. From the prompt line, choose *No change* if you want the pointer to remain the same, or choose *Relative* if you would like *AppleWorks* to change it to a new pointer with the same relative position as the Source.

To copy rows of information to the Clipboard, place the highlight bar on the beginning row of the Source and press OA-C. Now highlight the rows that you would like to copy and press Return. A duplicate of these rows is copied to the Clipboard, and you may now copy this information into the same worksheet or into another Spreadsheet file.

To copy information from the Clipboard into a worksheet, place the highlight bar in the row just below the place that you want to insert the new information and press OA-C. Note that it does not replace what is there, but instead it actually inserts the new information into the worksheet. This is different from copying information within a worksheet, for then the copied information replaces the old information. If the information on the Clipboard includes formulas, *AppleWorks* asks you whether you would like to copy Formulas & Values or Values Only. If you choose Formulas & Values, all formulas will be copied relatively, while the values are copied exactly. Choosing Values Only copies all information in value form only; all pointers are substituted with their calculated value.

Delete   OA-D

Word Processor   **Delete Text**
To delete text, place the cursor at the beginning or end of the text that you want to delete and press OA-D. Highlight the text to delete and press Return. You may also use OA-D to delete printer options and carriage returns by pressing OA-Z before initiating the delete command.

Data Base   **Delete Records or Category**
The Delete command is used in many different ways in the Data Base. Be sure that you are not deleting important data when you use this command.

You may delete single records or a number of records from the Data Base permanently. If you are in the multiple-record format, place the cursor on the record that you want to delete and press OA-D. Now highlight the portion you want to delete and press Return. If you are in single-record format, display the first record that you would like to delete and press OA-D. *AppleWorks* now prompts you to verify deleting each of the records to the end of the list. Choose Yes to delete the record and No to skip to the next record without deleting. Press Escape to stop the deleting process.

OA-D is also used on the Change Name/Category screen to delete a category from a record. Place the cursor on the category that you would like to delete and press OA-D. If the Data Base already has records entered, you are prompted to verify that you would like to delete the category and all the data associated with it as well as any special layouts or reports that are associated with it. Choose Yes or No from the prompt line.

On the Report Format screen use OA-D to delete a category from the report. This does not delete the category permanently; it only removes it from being visible in the report. Use Insert category, OA-I, to insert a previously deleted category back into the report. When you are creating a labels report format, OA-D also can be used to delete a blank space from a label.

When you are changing the layout of the multiple-record format on the Change Record Layout screen, use OA-D to delete a category. As in Report Format, this command does not delete the category permanently, but it can later be reinserted using OA-I.

Spreadsheet **Delete Columns or Rows**

You can delete whole rows or columns from the worksheet. Place the highlight bar in the row or column where you would like to start the deletion and press OA-D. Choose Rows or Columns from the prompt line, then highlight the rows or columns that you would like to delete, and press Return. After the deletion, the worksheet is reformatted so that the lettering and numbering of the rows and columns remains ordered and all formulas reference the correct cells. Remember that all

information in the deleted cells is lost, so be careful when using this command. If any formulas reference deleted cells, the formula is invalid and ERROR is displayed in the cell.

Find   OA-F

Word Processor   **Find Text, Page, or Marker**

The Find command can search for text (up to 30 characters), case-sensitive text, and markers or printer options that you have set in the document. Case-sensitive text is text in which the case of the letters—either upper or lower—is significant. Text can include any letter, number, or special symbol, including spaces. The Find command always searches forward in a document from the cursor, so be sure the cursor is before any block of text that you want to search. To search through a whole document, press OA-1 to place the cursor at the beginning of the paper. If you choose to search for case-sensitive text, *AppleWorks* searches for text that matches exactly what you typed in. If you want to change each occurrence of a word or phrase, remember to include searches for capitalized and plural versions.

To find either text or case-sensitive text, place the cursor before the block of text that you would like to search and press OA-F. Choose Text, Case-Sensitive Text, Marker, or Options from the prompt line; type in the text, the number of the marker, or two-letter code of the option you want to find; and then press Return. If the text is found, *AppleWorks* highlights the text and asks whether to search for the next occurrence or not. If the text, marker, or printer option is not found, then the message *Not found, press the Space Bar to continue* is displayed.

Data Base   **Find Records**

You may find all the records that have a particular piece of information using the Find Command. In either the single- or multiple-record layout, press OA-F. You may now type in the comparison information which can contain up to 30 characters of text including letters, numbers, special symbols, and spaces. *AppleWorks* finds all of the records in which the text appears in any category. This search is not sensitive to the case (upper or lower) of the letters. If *AppleWorks* finds the information

and you are in single-record layout, the first record found is displayed. You may now scroll through the rest of the found records, if any. If you are in multiple-record layout, all of the records that were found are listed. To return to the list of all Data Base records, press Escape.

Spreadsheet   **Find Entries or Text**

In the Spreadsheet, you can use the Find Command both to move to a particular cell and to search for text in a label. The find command cannot be used to find a particular value in the worksheet.

To move the highlight bar to a particular cell, press OA-F and choose Coordinates from the prompt line. Now enter the coordinate of the cell that you want to go to. The coordinate of a cell is the column letter and the row number typed together. (For example, A1 is the coordinate of the first cell in the worksheet.) The highlight bar jumps to the cell that you entered.

You can also find a particular word or phrase in the worksheet. Press OA-F and choose Text from the prompt line; type in the text that you would like to find. You can type up to 25 characters, including letters, numbers, and special characters. The search proceeds from left to right across columns for each row from the highlight bar forward. If the text is found, then the highlight bar moves to the cell in which the label has the found text.

If *AppleWorks* doesn't find the coordinate or the text, it gives a message to this effect and allows you to edit the entry and try again. As usual, press Escape to cancel the command and to return to Review/Add/Change.

The Find command prompt line also has another option, Repeat last, which allows you repeat the last find that you initiated.

Group   **OA-G**

Word Processor   **Not Applicable**

Data Base   **Add or Remove Group Totals**

When you are preparing to print a table report of your Data Base records while working on the Report Format screen,

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AppleWorks allows you to display both sum totals and subtotals of categories that are represented by numbers. You can use the Add or Remove Group Total command to tell *AppleWorks* which category you would like to use to trigger the printing of the subtotals. As the report is printing, every time the entry in the chosen category changes, a subtotal is printed for any category that is selected by the OA-T command. Only one category in the report can be used to trigger group subtotals. (See the description of the OA-T command to see how to add or remove totaling for a particular category and how to designate a category to be totaled.)

To assign a category for this purpose, put the cursor on the category and press OA-G. *AppleWorks* asks whether you would like to print group totals only. Choose No if you want all of the categories printed or Yes if you only want to print the categories that have been selected by the OA-T command. If you choose No to the option, Print group totals only, you also have an option to go to a new page after each group subtotal. If you choose Yes to this option, a new page is started after each subtotal is printed. After a category has been assigned, it is displayed on the sixth line of the screen next to the heading *Group totals on:*.

To remove the subtotaling of categories from a report press OA-G again, and the *Group totals on:* heading will disappear from the screen.

Spreadsheet   **Not Applicable**

***

Insert   OA-I
Word Processor   **Not Applicable**

Data Base   **Insert Record or Category**
Use Insert to add records or categories to your Data Base.

To Insert new records in either multiple- or single-record layout, place the cursor in the location that you would like to start the insertion and press OA-I. A blank record is now presented, and you may begin filling in the details for each category. Press Return after each entry. You may continue to add records by pressing return after the final entry for each record.

If you would like to stop the insertion and return to Review/ Add/Change press Escape.

OA-I is also used on the Change Name/Category screen to insert a category in a record layout. You may have new information that you didn't originally create a category for, or you may just want to move an already existing category into a new location, for example, to have it visible on the screen with other related categories. Place the cursor where you want the new category and press OA-I. You may be prompted to verify your insertion because it may result in the deletion of any special layouts or reports that exist in your Data Base file.

On both the Change Record Layout screen and Report Format screen, use OA-I to insert a previously deleted category back into the layout or report. When you are creating a labels report format, OA-I also lets you insert a spacing line above or below the cursor postion.

Spreadsheet **Insert Rows or Columns**
You can insert whole rows or columns into the worksheet. Place the highlight bar in the row or column that you would like to put the insertion and press OA-I. Choose Rows or Columns from the prompt line; then type the number of rows or columns that you would like to insert and press Return. After the insertion, the worksheet is reformatted so that the lettering and numbering of the rows and columns are correct, and all formulas reference the correct cells. The maximum number of rows or columns that can be inserted is nine at a time.

Justify or Jump **OA-J**
Word Processor Not Applicable

Data Base **Justify Category in Report**
Use Justify to right-justify categories in table reports and to left-justify categories in label reports. (Justified text is flush with the margin.) This command is only available when you are laying out your report for printing on the Report Format screen. You get to the Report Format screen by pressing OA-P (Print).

Justifing categories in a table report is particularly handy when the category contains numbers, since numbers are easier

to read if they are aligned flush right in a column. To right-justify a category in a table report, place the cursor on the category that you want to justify and press OA-J. *AppleWorks* asks for the number of decimal places that you want in the category. If the category contains decimal numbers, enter the number of decimal places that should be printed to the right of the decimal point; otherwise enter zero. You also need to enter the number of blank spaces you want printed after the category in the report. This is the number of blank spaces that are between the justified category and the next category. A series of nines are now shown in the category to show that it is justified. Notice that the decimal spaces and the blank spaces are included in the set column width. Therefore, you may need to adjust the column width so that all of the justified information is presented in its entirety. To remove justification from a category, place the cursor on the justified category and press OA-J.

The Justify command is also used to left-justify categories in a label report. This command is used if you want to print one category after another on the same line. When a category is left-justified, it prints only one space between the justified category and the category to its left. To justify a category, place the cursor on the first character of the category and press OA-J. A < is displayed as the first character of the category to show that it is left-justified. To remove justification from a category place the cursor on the < of the justified category and press OA-J.

Spreadsheet   **Jump to Other Window**
If you have set two windows in your worksheet by using the OA-W command, you can use the Jump command to move the highlight bar from one window to the other. To jump to the other window press OA-J. To move back to the window that you started from, press OA-J again.

Calculate   OA-K

Word Processor   **Calculate Page Breaks**
Use this command to calculate where the pages would be broken if you were to print the document. Many times you need

to know where the pagination occurs so that you can insert printer commands to keep groups of lines together on one page. To calculate the page breaks, press OA-K, and then choose the printer which will be used when the document is actually printed. The page breaks are designated by dashed lines labeled with the page that is ending at that spot. Once you begin to edit the paper again, these dashed lines disappear.

Data Base **Insert a Calculated Report Category**

The Calculate command is used in the Data Base to add new categories to be printed in the report that are calculated from existing categories. To insert a calculated category, place the cursor on the category that you want to be to the right of the calculated category and press OA-K. A new category is inserted with the name Calculated, which you are able to change. After you have entered the name of the category, *AppleWorks* prompts you to type in the formula that is used for the calculation. You may use addition (+), subtraction (−), multiplication (*), division (/), constant numbers, and the letters corresponding to existing categories. You may not use parentheses to group operations. After you have entered the formula, you must also provide the number of decimal places that should be printed to the right of the decimal point and the number of blank spaces to be printed after the category in the report. This is the number of blank spaces that will be printed between the calculated category and the next category. You may have up to three calculated categories in your report, and you can delete them using OA-D.

Spreadsheet **Recalculate Worksheet**

You may recalculate the worksheet at any time by pressing OA-K. All of the formulas are recalculated and their results are displayed. If you have set the frequency of calculation to Manual using the OA-V command, you must always manually recalculate the worksheet. This command is also used when you have forward references in your worksheet which require you to calculate the worksheet twice or more. A forward reference is when your formula references a cell that also contains a formula and, under normal circumstances, is always calculated after your first formula.

Layout OA-L

Word Processor Not Applicable

Data Base **Change Record Layout**
You have the option to change the arrangement of the catego-
ries of multiple- and single-record layouts. Use this command
to change the record layout to meet your current needs. In
single-record layout, you can arrange your categories to facili-
tate data input and readability.

If you are in multiple-record layout at the Review/
Add/Change screen, press OA-L to change the layout. You
are now shown the Change Record Layout screen. Using other
commands, you may now change the column width of any
category, switch the order in which the categories appear,
temporarily delete a category from a layout, or insert a previ-
ously deleted category. When using these command be sure
the cursor is on the first character of the category. To return to
the Review/Add/Change screen, press Escape.

Before you are returned to Review/Add/Change, *Apple-
Works* offers you the chance to change the direction of cursor
movement when you press Return in the Review/Add/Change
or the Insert New Records screen. Choose Down (the standard
setting), for the cursor to go down the column of entries in a
particular category, or Right, for the cursor to go from one cat-
egory to the next.

In single-record layout, press OA-L to change the layout.
You may now use the Open Apple key in conjunction with
the arrow keys to change the location of the categories on the
screen. Press Escape to return to the Review/Add/Change
screen. Before you return, *AppleWorks* again prompts you to
choose the direction of cursor movement when Return is
pressed in Review/Add/Change or Insert New Records for
single-record layout. If you would like the cursor to move
from category to category according to the way you originally
ordered them on the Change Name/Category screen, choose
Order in which you defined the categories. If you would like the
cursor to move from left to right and from top to bottom, the
way they are laid out on the screen, choose *Left to right, top to
bottom.*

Spreadsheet   **Change Cell Layout**

Using the Change Cell Layout command, you can change the format of a particular cell or a group of cells. This command works like the Value command (OA-V), which sets the standard format conventions for the whole worksheet. Use OA-L when you want some of the cells to have formats different from worksheet standards. The Change Cell Layout command allows you to change the Value format, the Label format, the Protection (to "lock" contents of your cells), and, if whole columns are being formatted, the column width.

To change the layout of a group of cells, place the highlight bar on the beginning cell and press OA-L. You may now choose to format the entry, rows, columns, or a block. If you choose rows, columns, or a block, highlight the cells that you want to include. Formatting rows or columns changes only the entries that already appear in those rows or columns, not future entries. It is suggested that you format a whole block of cells since all current entries and any future entries will follow the same layout.

After you have defined the cell or cells that you would like to format, choose Value format, Label format, or Protection from the prompt line.

If you are changing the Value format, you have six layout formats to choose from.

1. *Fixed* lets you fix the number of digits after the decimal point.
2. *Dollars* puts a dollar sign before each entry, puts negative values in parentheses, and sets off thousands with commas.
3. *Commas* sets off thousands with commas, puts negative values in parentheses, and lets you fix the number of digits after the decimal point.
4. *Percent* multiplies the entry by 100 and adds a percent sign after the entry.
5. *Appropriate* displays only the amount of decimal places that are significant for a calculation (for example, ½ would be displayed as .5, and ⅓ as .333333); otherwise, it displays the value as it was typed in.
6. *Standard* sets the format back to the default or to that set with OA-V.

If you are changing the Label format, you have four lay-out formats to choose from.

1. *Left justify* aligns labels with the left margin of cells.
2. *Right justify* aligns labels with the right margin of cells.
3. *Center justify* centers the labels within the cells.
4. *Standard* sets the format back to the default or to that set with OA-V.

Setting Protection for a cell or a group of cells guarantees that only a particular type of entry is made in that cell or cells. You have four protection formats to choose from.

1. *Labels only* allows only labels to be entered in the cells.
2. *Values only* allows only values to be entered in the cells.
3. *Nothing* allows nothing to be entered in the cells.
4. *Anything* allows anything to be entered in the cells.

You may also change the column width of a single column or a group of columns using the OA-L command. After pressing OA-L, choose Columns, then highlight the columns that you would like to change, and press Return.

Now you can choose Column Width from the prompt line and use OA-← or OA-→ to define the column widths.

Move   OA-M
Word Processor   **Move Text**

You can move text within a word processor document or move text to or from the Clipboard. Whenever you use the Move command, the text that you are moving is deleted from its original location and placed somewhere else. The maximum number of lines that can be moved is 250.

To move text within a word processor document, place the cursor at the beginning or end of the text that you want to move and press OA-M. From the prompt line, choose Within document; then highlight the text that you want to move and press Return. Move the cursor to the place where you want the text to be moved to and press Return again.

If you want to move text to the Clipboard press OA-M and choose To Clipboard from the prompt line. Now select up to 250 lines of text and press Return. The text is now on the

Clipboard, and from there, it can be copied (OA-C) or moved (OA-M) to another Word Processor document.

   To move text from the Clipboard into a Word Processor document, place the cursor where you want the Clipboard contents and press OA-M. From the prompt line, choose From Clipboard and press Return. Whatever is on the Clipboard is moved into your document, and the Clipboard is cleared. *The Clipboard is empty* is displayed if there is nothing on the Clipboard. If there are Data Base records or Spreadsheet cells on the Clipboard, *AppleWorks* does not allow them to be copied to your word processor document, unless they were transferred onto the Clipboard using the OA-P command which prints the information to the Clipboard. See "Using the Clipboard for Integration" in Chapter 3 and Print (OA-P) in this chapter for more details on printing to the Clipboard.

Data Base   **Move Records**

In the Data Base, you can move records to or from the Clipboard. To move records from your Data Base file to the Clipboard, you first need to be in multiple-record layout. If you are not in multiple-record layout, press OA-Z to zoom there. Place the cursor on the first or last record of the record range that you want to move and press OA-M. Choose To Clipboard from the prompt line and press Return. You may now highlight the records that you want to move. When you have highlighted the desired records, press Return. The records are removed from the Data Base file and are placed on the Clipboard. You may now move (OA-M) or copy (OA-C) these records to the same or another Data Base file.

   Likewise, to move records to your Data Base file from the Clipboard, you first need to be in multiple-record layout. If you are not, press OA-Z to zoom there. Position the cursor after the place you want these records to go and press OA-M. Choose From Clipboard from the prompt line and press Return. The records are then removed from the Clipboard and placed into your file. If there are no records or if the information on the Clipboard is not Data Base information, an error message is displayed and no move is completed.

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Spreadsheet   **Move Rows or Columns**

In the Spreadsheet, you can move columns or rows of cells within the worksheet or move rows to or from the Clipboard.

To move rows or columns within a worksheet, place the highlight bar at the beginning or end of the range that you want to move and press OA-M. Choose Within worksheet and either Rows or Columns from the prompt line. You may now highlight up to 250 rows or 125 columns. When you have finished the selection, press Return. To move the selection, place the highlight bar in the new location for the rows or columns and press Return. If you are moving columns, *AppleWorks* puts the columns to the left of the highlight bar. If you are moving rows, *AppleWorks* puts the rows above the highlight bar. In both cases, the worksheet is reformatted so that any formulas that have been moved continue to refer to the same exact cells in the worksheet, even if their row and column numbers have changed.

To move rows of information to the Clipboard, place the highlight bar on the beginning row of the Source and press OA-M. Now highlight the rows that you would like to move and press Return. The rows are now removed from the worksheet and placed on the Clipboard. You may now move (OA-M) or copy (OA-C) this information into the same worksheet or into another Spreadsheet file.

To move information from the Clipboard into a worksheet, place the highlight bar in the row just below the place where you want to insert the new information; press OA-M. If the information on the Clipboard contains formulas, *Apple-Works* asks whether you would like to move the Formulas & Values or Values Only. If you choose Formulas & Values, all formulas are copied relatively (the pointers are changed to refer to the correct cells), while the values are copied exactly. Choosing Values Only copies all information in value form only, and all pointers are substituted with their calculated value.

Name Change   OA-N

Word Processor   **Change Filename**

To change the name of a word processor file, press OA-N. Type the name of the file and press Return. Notice that the name of the file changes in the upper left-hand corner of the screen. This command does not save the file, so if you'd like to save the same file under two different names, it's not too late to change the name back, save the file (OA-S), and then change to the new filename.

Data Base   **Change File, Category, or Report Name**

When you press OA-N in the Data Base, you see the Change Name/Category screen. On this screen, you can change the name of the file, the names of the categories, or you can insert and delete categories. The cursor is flashing on the current name of the file when you first see this screen. To change the name of the file, first press OA-Y to clear the current name, then type the new name, and press Return. If you do not want to change the name of the file, but want to change the categories, press the down-arrow key to place the cursor on the first category. To change the name of a category, place the cursor on the category and press OA-Y to clear the entry. Then type the new category name and press Return. You may also insert (OA-I) or delete (OA-D) categories while at this screen (see the description of these commands for a complete explanation of their use).

You may change the name of a Report Format or the title of the report by pressing OA-N at the Report Format screen. You are prompted to type in the new name of the format and the title of the report. Since the report formats that you create are saved with your Data Base file, changing the name will insure that a new format that you created from an existing format will be saved. The report title can be any text, up to 79 characters, that you want printed on the top of each page of your report. If you don't want a title just press Return, leaving the space blank.

Spreadsheet   **Change Filename**

To change the name of a spreadsheet file, press OA-N. Type
the name of the file and press Return. Notice that the name of
the file changes in the upper left-hand corner of the screen.
This command does not save the file.

Printer Options   **OA-O**

Word Processor   **Printer Options**

There are many different printing options that can be used to
format your document so that you will get the results you
want when you print it. *AppleWorks* has default values for
many of these options—like top, bottom, left, and right mar-
gins—but these can be changed easily using the embedded
printer options. These options are inserted directly into your
paper where you want the format to take effect. An embedded
printer option overrides any default or previously set option.
There are options to control horizontal and vertical spacing,
indention, justification, pagination, and style of type. Each of
these options is discussed in detail in Chapter 3.

To insert an option, place the cursor where you want it to
take effect and press OA-O. A list of 38 options appears on
the bottom of your screen, and you are prompted to type the
two-letter code corresponding to that option. Some options
also require you to enter more information, like the number of
inches you want in the left margin. You may enter as many
options at a time as you like. When you are finished, press Es-
cape to return to the Review/Add/Change screen.

To see the options once you have set them within your
document, press OA-Z, to zoom in. Most options appear with
eight dashes and then the name of the printer option printed
flush left on your screen on lines by themselves. Others are
only signified by a caret (^). You can find out what the caret
means by placing the cursor on it and looking at the bottom of
the screen where the line and column numbers usually ap-
pear. The name of the option is displayed instead of the line
and column numbers. Printer options can be deleted by using
the Delete command (OA-D).

Data Base   **Printer Options**

When preparing to print a table or labels from the Data Base, you can set some default printer options by pressing OA-O at the Report Format screen. A screen with all of the printer options is displayed. You may change any of the options by typing the two-letter option code and pressing Return. Some options also require you to fill in crucial information—inches specifications for left margin, for example. After you type the information, you see the change verified to the right of the option on the screen. Complete your specifications and then press Escape to return to the Report Format screen. For a detailed description of printing from the Data Base, see the Data Base section in Chapter 3.

Spreadsheet   **Printer Options**

Before you print your worksheet, you can change the default printer options by pressing OA-O at the Review/Add/Change screen. A screen with all of the printer options is displayed. Change any of the options by typing the two-letter option code and then Return. Enter more information as needed, such as the number of inches you want for the left margin. After you type the information, you see the change indicated to the right of the option code on the same screen. Complete your specifications and press Escape to return to the Review/Add/ Change screen. For a detailed description of printing from the Spreadsheet, see the section about this topic in Chapter 3.

Print   **OA-P**

Word Processor   **Print Text**

Printing is one the most important functions in *AppleWorks*. You can print a Word Processor document to a printer or to a disk. You may want to print to a disk so that a document can be viewed in another program or transported over communication lines to a friend or business associate.

   To print a document, press OA-P and choose where you would like to start the printing from. Select *Beginning* to print the whole document, *This page* to print the document starting at the page the cursor is on, or *Cursor* to print from the paragraph the cursor is in. Now choose where you would like to

print the document. If you are printing to the disk, you must provide a ProDOS pathname. If you are printing to a printer, choose the printer and enter the number of copies of the document that you desire. You can print up to nine copies, but *AppleWorks* assumes that you only want one so it provides a default 1 on the prompt line. When the document is being printed either to the disk or the printer, you can stop the printing and return to Review/Add/Change by pressing Escape. If you would like to pause the printing, press the space bar; to continue printing, press it again. When the printing is complete, you are returned to the Review/Add/Change screen.

Data Base   **Report Menu or Print Report**
Printing from a Data Base file is a little bit more complicated than printing a Word Processor document. *AppleWorks* refers to a printed output of your Data Base file as a Report. You can print your Data Base file as a table or a label report. As their names suggest, a table report prints your information in a tablelike format that looks like the multiple-record layout on your screen, while a label report prints your file in single-record layout, ideal for mailing labels or index cards. *Apple-Works* allows you to create different types of reports that can be used within the same Data Base file, and it saves these report formats along with your Data Base file for future use.

To print a report from the Review/Add/Change screen, press OA-P. You now have five options to choose from.

1. *Get a report format.* Choose this if you have already created a report format and would like to use it to print your report. A menu of formats is displayed for you to choose from.
2. *Create a new tables format.* Select this option if you would like to create a new report format of the table type. You are asked to provide a name for the report format. Use one that reminds you that it is a table format.
3. *Create a new labels format.* Choose this if you would like to create a new label report format. You are asked to provide a name for the report format. Be sure to use one that reminds you that it is a label format.
4. *Duplicate an existing format.* If you would like to use another format as the basis for a new one, select this option. A

menu of existing formats is displayed. Choose the one that you would like to use and give it a new name.

5. *Erase a format*. This option allows you to erase an already created format. You'll find this one handy, as there is only room for eight report formats. A menu of current format names is displayed. Choose the one that you would like to erase and press Return. You are then asked to verify that you indeed want to permanently erase the format.

If you decided to use an existing format, create a new one, or duplicate an existing format, your final destination is the Report Format screen. At this screen you can modify the report in many different ways. See "Printing from the Data Base" in Chapter 3 for more details on formatting your reports.

Assuming you have your format all squared away, press OA-P to print the report. In addition to the printers that you have set up, other printing destinations can include the screen; the Clipboard, for pasting your report into a Word Processor document; the Clipboard, for mail merge (only for table reports); an ASCII file on disk; or a *DIF* file on disk. Choose your destination and then enter the date of the report to be used in the header if you have one. If you are printing to a printer, also enter the number of copies of your report that you wish to print. If you are printing to an ASCII or *DIF* file on a disk, you also need to provide a ProDOS pathname. When the document is being printed either to the disk or to the printer (but not to the Clipboard), you can stop the printing and return to Report Format by pressing Escape. If you would like to pause the printing, press the space bar. To continue printing, press it again. When the printing is complete, you are returned to the Report Format screen.

Spreadsheet   **Print Worksheet**

To print from the worksheet, place the highlight bar in the corner of the area that you would like to print and press OA-P. You can now choose to print the entire worksheet or selected rows, columns, or a block of cells. If you choose Rows, Columns, or Block, use the arrow keys to highlight the area to print and press Return. Choose where you would like to print the worksheet. Aside from the printers that you have set up,

other destinations for your printing can be the Clipboard for pasting your report into a Word Processor document, an ASCII file on disk, or a *DIF* file on disk. Depending on the print destination you are using, you may have to enter the date, the number of copies that you would like to print, or a ProDOS pathname. Print the information to the Clipboard if you would like to paste it into a Word Processor document.

You may need to print the information to a *DIF* file to use in another program, or you may need to create an *AppleWorks* Data Base file. This method is the only way that you can transfer information from the Spreadsheet to the Data Base. If you are printing to a *DIF* file on disk, you need to decide in which order the rows and columns should be printed. By selecting Rows, *AppleWorks* prints the information from the worksheet row by row, while selecting Columns prints column by column. If you are going to use the *DIF* file to create an *AppleWorks* Data Base file, choose to print by columns.

When the document is being printed either to the disk or to the printer (but not to the Clipboard), you can stop the printing and return to Review/Add/Change by pressing Escape. If you would like to pause the printing press the space bar; to continue printing, press it again. When the printing is complete you are returned to the Review/Add/Change screen.

Replace or Record Selection OA-R

Word Processor **Replace Text**

Sometimes you need to replace each occurrence of a word in your text with another one. The Replace command (OA-R) allows you to search through a document, locate the word, and insert a new one. You can even replace all occurrences of a single word throughout your whole document. Place the cursor before the section of text you want to search (at the beginning of your document if you want to look through the whole document) and press OA-R. The prompt line asks you to choose between *Text* or *Case-sensitive text*. Choose Text to replace any occurrence of the text that you type in whether it occurs in uppercase or lowercase letters. If you type in *he*, *AppleWorks* replaces both *He* and *HE*. Case-sensitive text only replaces those words that exactly match the case of the letters

you type in. You are now prompted to enter the text you
would like to find. If you have used the Replace Command re-
cently, your most recent entry appears on the prompt line
where you left it. To erase such text, either clear it by using
the Clear Command (OA-Y), type over it using overstrike
mode (OA-E), or edit it using the arrow keys and Delete. Next,
enter the text you want to replace your found entry with. This
entry, too, may have default text that you can delete or accept.

  AppleWorks now gives you a choice between replacing
your entry one case at a time or all at once. If you choose *One
at a time*, you are prompted to verify the replacement at every
occurrence, and you are given the option to continue or not. If
All is your choice, *AppleWorks* replaces all of the occurrences
while you wait and then returns you to editing. Be careful
when using the All method of replacing text, as some strange
results can occur. For instance if you want to replace *in* with
into all at once, a phrase like *In the beginning* would result in
Into the begintonintog. *AppleWorks* replaces your text even if it's
in the middle of a word. You can get around this by prefacing
and ending your entry with a space. If your text is not found,
the message *Not found, press Space Bar to continue* appears in
the prompt line.

Data Base   Change Record Selection Rules
At times you may want to display or print only records in
your Data Base that meet a selected criteria. For instance you
may want to print mailing labels from a customer file for only
those customers who live in a certain zip code area. *Apple-
Works* has complex record-selection rules to establish the crite-
ria. On line 3 of the screen, you can see the current selection
rules for your Data Base file. The default selection rule is All
records, which tells you that all of the records are now in-
cluded in the selection. If you're in Review/Add/Change or
Report Format, press OA-R to change the record-selection
rules. A list of your categories is displayed. Choose the cate-
gory that you would like to use to establish your first rule; you
can have up to three rules. Now choose the operation of com-
parison, such as *equals* or *is blank*. All of the selection rules,
except *is blank* or *is not blank*, require you to also enter the

value or text to use in the comparison. If you are satisfied with the selection rule, press Escape or choose a connector *(and, or,* or *through)* to begin your second rule. The *and* connector makes your selection more specific by requiring the category to satisfy both of the rules, while *or* only requires one of the rules to be true for the record to be included. The *through* connector establishes a range of values of a category that should be included in the selection.

Spreadsheet   **Not Applicable**

Tabs, Totals, or Titles   OA-T

Word Processor   **Set Tabs**

You can set or clear tab stops in your word processor just like you can on a typewriter. The tab stops are indicated by vertical bars (|) on the second line of the screen, which are separated by equal signs (=). They are preset every five spaces. A tab stop sets the column your cursor jumps to when the Tab key is pressed. If there is already text on the line where the cursor sits, pressing Tab causes the cursor to jump over the text to the next tab stop. Notice that pressing Tab does not move text around unless the tab stop is after the last character on that line. Pressing OA-Tab moves the cursor backwards one tab stop.

You can set or clear one tab stop, or remove them all by pressing OA-T. Your cursor jumps directly up to the Tab Stop line, which is the second line of the screen. Notice that the column number of the cursor position is displayed on the prompt line. To set the tab at the location of the cursor, press S (for Set tab); to clear it, press C (for Clear tab); to remove them all press R (for Remove all tabs). You can move the cursor along the Tab Stop line using the left-arrow and right-arrow keys. The tab stops are saved with your document so you do not have to set them every time you edit it. Press Escape to return to editing your document.

Data Base   **Report Category Totals**

When you are printing a table report in the Data Base, sometimes it may be necessary to include summary information regarding a particular category. Although there is no facility to

provide summary information for categories of pure text, you can total a category made up of numbers. When you print out the report, the total of a column of numbers is printed with an asterisk (*) beside it. You can also subtotal totaled categories using the Group command OA-G. See the discussion of this command for more details.

To set a category to be totaled, first go to the Report Format screen and place the cursor on the category to be totaled; then press OA-T. If the category contains decimal numbers, enter the number of decimal places that should be printed to the right of the decimal point; otherwise enter zero. Also enter the number of blank spaces to be printed after the category in the report. This is the number of blank spaces that will be printed between the totaled category and the next category. A series of nines is displayed in the category to show that it is justified, and dashes are displayed at the bottom of the column to show that it will print totals. Notice that the decimal spaces and the blank spaces are included in the set column width. Therefore, you may need to adjust the column width so that the information will be printed in its entirety.

Spreadsheet   **Freeze Titles**

A title is text that you use to label your rows or columns in your worksheet. These titles usually run across the top and down the left side of your worksheet. Often you may want to freeze these titles in their place so that you can use them for reference no matter where you are in your worksheet. Let's say for instance that your titles in column A are frozen. If you move the highlight bar to the left and come to the end of the screen, instead of scrolling column A off the screen to the right, it remains there, and column B disappears instead.

To freeze your titles, place the highlight bar to the left of the row of titles that you want to freeze and/or below column titles that you want to freeze and press OA-T. Now choose Top to freeze only the column titles, Left side for only the row titles, or Both to freeze both the column and row titles. To unfreeze the titles, press OA-T again and choose None.

When your titles are frozen and you scroll to the topmost or leftmost title of your worksheet, you see two sets of titles. Don't be alarmed as only one is active. *AppleWorks* does not let you put the highlight bar on frozen titles.

Edit Cell Contents   OA-U

Word Processor   Not Applicable

Data Base   Not Applicable

Spreadsheet   **Edit Cell Contents**

Whenever you move the highlight bar to a cell in the worksheet that already has a label, value, or formula—and you enter a new label, value, or formula—the old one is replaced. You may want to just change the value, label, or formula slightly. To do this, place the highlight bar on the cell that you want to change and press OA-U. The entry appears with the cursor in the second-to-last line on the screen. You may now use any of the general commands, such as OA-Y, left arrow, right arrow, Delete, or OA-E, along with typing in new characters to edit the entry. Press Return to accept the new entry. If you make a mistake during editing, press Escape before pressing Return and your previous entry will be restored.

Value   OA-V

Word Processor   Not Applicable

Data Base   **Set Standard Values**

The OA-V command serves two purposes in the Data Base. One use is to set up standard values for all future entries in a category. You can make *AppleWorks* insert the same value in a category for every newly inserted record without typing it yourself. This is useful if values for particular categories rarely change from record to record. To set up a standard value in a record, press OA-V while at the Add/Review/Change or Insert New Records screen. A single-record layout of your record is displayed with the cursor on the first category. Use the arrow keys to place the cursor on the category that you want to have the standard value in and type it in. Like always, the general editing commands are available. Whenever you insert

a new record using OA-I, or when adding to the end of a file, the standard values are already in the new record. During the inserting process, you can always edit a standard value. Note that the standard value is only used when inserting future records into your Data Base file. All current records remain unchanged.

The other use for OA-V in the Data Base is when you are preparing a label report and want to include not only the category entry but also the category name in the report. After you set a category to have this special format, whenever you print out the report, it first prints the category name with a colon and then the actual entry. This is useful when it is not obvious what information is in the category. To set up a category with this type of format, place the cursor on the first letter of the category and press OA-V. On the screen, a colon is placed after the category name along with the first entry of that category to show that both will be printed. To remove the category name, place the cursor on the first letter of the category and press OA-V.

Spreadsheet   **Set Standard Values**
Using the Set standard values command, you can change the display format conventions for the whole worksheet. With this command, *AppleWorks* allows you to change the value and label format for all cells, and the column width for all columns. You can also turn cell protection on and off, and set up how *AppleWorks* recalculates the worksheet. To change the standard values for your Spreadsheet document, press OA-V and choose Value format, Label format, Column width, Protection, or Recalculate from the prompt line.

If you are changing the value format, you have five layout formats to choose from.

1. *Fixed* lets you fix the number of digits after the decimal point.
2. *Dollars* puts a dollar sign before each entry, puts negative values in parentheses, and sets off thousands with commas.
3. *Commas* sets off thousands with commas, puts negative values in parentheses, and lets you fix the number of digits after the decimal point.

4. *Percent* multiplies the entry by one 100 and adds a percent sign after the entry.
5. *Appropriate* displays only the amount of decimal places that are significant for a calculation; otherwise it displays the value as it was typed in.

If you are changing the label format you have three layout formats to choose from.

1. *Left justify* aligns labels with left margin of the cells.
2. *Right justify* aligns labels with right margin of the cells.
3. *Center justify* centers the labels within the cells.

If you are changing the column width of all of the columns, use OA-← or OA-→ to change the widths. OA-← makes every column narrower by one character, while OA-→ makes them wider by one character.

Setting protection for a cell or a group of cells guarantees that only a particular type of entry is made in that cell or cells. You can use this feature to insure that cells with critical values, labels, or formulas are not inadvertently changed by others (or by yourself for that matter). You usually protect a cell after you put an entry in it rather than before.

You have four protection formats to choose from.

1. *Labels only* allows only labels to be entered in the cells.
2. *Values only* allows nothing but values to be entered in the cells.
3. *Nothing* allows nothing to be entered in the cells.
4. *Anything* allows anything to be entered in the cells.

You set protection for cells using the Layout command (OA-L), but you turn protection on and off throughout the whole worksheet using the Set Standard Values command (OA-V).

If you are changing the way *AppleWorks* calculates the worksheet, you may either change the order or the frequency of the calculation. The order of calculation is designated either by Rows or by Columns. If you choose Rows, *AppleWorks* calculates all the formulas in one row and then it proceeds to the next row. Choosing Columns tells *AppleWorks* to calculate all

of the formulas in a single column before going to the next column. The order of calculation is important when one formula relies on the results of another. You want to insure that the reference formula will be calculated first. Sometimes it is not possible to do this, and the Calculate command (OA-K) has to be used.

You can set the frequency of calculation to either Automatic or Manual. If it is set to Automatic, every time an entry is made into the worksheet, the whole worksheet is recalculated. Since *AppleWorks* calculates formulas very quickly, automatic is usually desired; however when your worksheet gets large, you may not want to wait around for *AppleWorks* to calculate the whole worksheet after each new entry is made. In this case, set the Frequency option to Manual. When the frequency of calculation is set to manual, formulas are only calculated when the Calculate command (OA-K) is used or when the frequency is set back to Automatic. You can see that *AppleWorks* is calculating when a message is displayed at the bottom of the screen; for example, *Calculating Column <A>* or *Calculating Row <6>*.

Whenever you create a new worksheet, *AppleWorks* sets the standard values.

Column Width	9 characters
Protection	On
Label Format	Left justify
Value Format	Appropriate
Recalculation Frequency	Automatic
Recalculation Order	Columns

If you forget what the standard values are, press OA-? (Help) and scroll to the bottom of the text. Here the standard values are displayed.

Create Windows   OA-W

Word Processor   Not Applicable

Data Base   Not Applicable

Spreadsheet   Create Window

Sometimes you may want to look at two parts of the worksheet at the same time, but due to the limitations of the screen

size, you can't. The Create Window Command allows you to split the screen either horizontally or vertically into two windows. Think of a window as a screen unto itself, where the worksheet scrolls in the window just as if it were the whole screen. After you split the screen, you have two copies of your worksheet—one in which you can display one part of your worksheet and another in which you can display an entirely different part of the worksheet. With this feature, you can play what-if games by changing a value and seeing how it affects the rest of your worksheet values.

To split the screen into two windows, place the highlight bar in the row or column where you would like the division to occur and press OA-W. You may now split the screen vertically by choosing Side by Side, or horizontally by choosing Top and Bottom. If you choose Side by Side, you see two sets of row numbers, and if Top and Bottom, two sets of column letters. Now that you have two windows on the screen you can jump from one to the other using the Jump command (OA-J). Even though it may seem you have two different copies of your worksheet on the screen, *AppleWorks* still thinks of it as one; so if you make an entry in one window, it affects the worksheet in the other. Each window can move independently of the other, or you may press OA-W again and choose Synchronized, from the prompt line, if you would like them to scroll together. If you have two synchronized vertical windows, the row numbers line up and move together when you scroll. If you have two synchronized horizontal windows, the column letters line up and move together when you scroll. If you would like to go back to a one window screen, press OA-W again and choose One from the prompt line.

Zoom   OA-Z

Word Processor   **Display Formats**

Your Word Processor document can be displayed on the screen in two ways. In one, the printer options and Return characters are displayed. In the other, they are not. Press OA-Z to switch between the two different types of display formats. Printer options are options that you set, using OA-O, to control the way the document is formatted when you print it. They are de-

noted by eight dashes with the name of the printer option on a single line. Return characters are the characters that are inserted into your document when you press Return. They are represented by a single cross-hatched box. At times it may be useful to see where the printer options and return characters are so that you can make decisions on new formats or edits.

Data Base   **Switch Layouts**

Your Data Base file can be displayed on the screen in two ways. Multiple-record layout displays each Data Base record on a line of its own with the category entries arranged in columns, while single-record layout displays only one record on the screen with all of its entries. You can switch between these two types of display layouts by pressing OA-Z. In multiple-record layout you can see up to 15 different records, but usually there is not enough room on each line to display all of the categories. Though they cannot be seen, they still exist in your Data Base file and can be viewed all at once by zooming into single-record layout.

To see a record in the more detailed single-record layout, place the cursor on an entry in the record and press OA-Z. The record is now displayed singly with all of the categories and entries present. The cursor is on the entry that it was on in multiple-record layout. To return to multiple-record layout, press OA-Z again. Use multiple-record layout to browse through and arrange your records, and use single-record layout to see a record in more detail and to facilitate quicker data entry.

Spreadsheet   **Display Formulas**

The Spreadsheet usually displays only labels, entered values, and calculated values, but you can see the formulas that were used to calculate the values by pressing OA-Z. In all cells that have a value derived from a formula, the formulas are displayed instead of their calculated values when you press OA-Z. This is useful to see which cells in your worksheet are calculated from formulas and which are just entered values.

Ditto	**OA-"**
Word Processor	Not Applicable

Data Base	**Ditto Entry**

In multiple-record layout, you can replace the entry on which the cursor rests with the entry directly above it using the Ditto command (OA-"). To do this, move the cursor onto the entry that you want to replace and press OA-" (don't press the Shift key).

This command is useful when you want to repeat the same entry in several records, something which can also be achieved using the Set Standard Values Command (OA-V).

Spreadsheet	Not Applicable

Switch Categories	**OA-< and OA->**
Word Processor	Not Applicable

Data Base	**Switch Categories**

The Switch commands are used to switch the position of a category with an adjacent category. These commands are available at the Change Record Layout screen for multiple-record layout, and at the Report Format screen for table reports. To switch two adjacent categories, place the cursor on the category that you want to switch. Press OA-< (without pressing the Shift key) to switch a category with the one to the left of it, or press OA-> (again, without pressing the Shift key) to switch it with the category to its right.

Spreadsheet	Not Applicable

Sticky Space   OA-Space Bar

Word Processor   Sticky Space

You can cause two words to always appear together on the
same line by separating them with what is called a *sticky*
space. When a sticky space is used to "glue" two words to-
gether, it looks like a regular space. But if a word-wrap at-
tempts to break up the two words, it is not successful and both
words wrap to the next line together. A sticky space is useful
when a proper noun that is made up of two separate words is
used, such as St. Paul or Dr. Smith.

Data Base   Not Applicable

Spreadsheet   Not Applicable

Chapter 5
Using *AppleWorks* With Other Products

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Using *AppleWorks* with Other Products

Since *AppleWorks* is the by far the best selling software package for the Apple II family, many hardware and software developers are jumping on the *AppleWorks* bandwagon. Pick up any of the popular Apple II journals and you can hardly turn a page without seeing headlines like, "Works with *Apple-Works*," "*AppleWorks* Compatible," or "Expand *AppleWorks* with...." The abundance of useful add-ons makes it easy to expand your *AppleWorks* capabilities even further. The success of such companies as Applied Engineering and Pinpoint Publishing, to name just two, provides ample testimony to the demand for third-party *AppleWorks* products.

There are many products, both hardware and software, that you can use in conjunction with *AppleWorks*. Some were actually produced to work exclusively with *AppleWorks*, while others, having broader applications, claim *AppleWorks* compatibility. Let's classify the different types of products that you can use with *AppleWorks*.

Hardware Products

These products generally cater to the space and speed limitations of *AppleWorks*. They include memory expansion boards, extra disk drives, processor accelerators, and clock/calendar expansion.

Memory expansion boards give you more space on the *AppleWorks* Desktop. Most also reduce other internal limitations of *AppleWorks*—by adding, for example, lines in the Word Processor, records in the Data Base, rows and columns in the Spreadsheet, and space on the Clipboard. Memory expansion boards also speed up *AppleWorks* since they enable you to load the whole program into RAM at one time. Most of the boards come with their own special software which

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modifies *AppleWorks*, sets up RAM disks, and manages your Apple computer's memory.

A RAM disk is a simulated disk drive that resides in RAM. You load and save files to it just as with any disk drive, but the speed increase is considerable. Be careful with RAM disks, though, because if you don't have battery-backup power for your memory board and the power is interrupted (most likely because you accidentally turned off your computer), any files on the RAM disk are lost.

Extra disk drives such as hard disk drives or 3½-inch disk drives allow you to store more data in one place without having to swap your disks in and out of your drive constantly. If you don't already have a second disk drive, then it should probably be your first purchase. If you have a business that uses *AppleWorks* extensively, a hard disk drive may be in order. Hard disk drives have varying amounts of storage capacity, from 5 to 30 megabytes or more. One megabyte of storage is about equal to the storage capacity of seven 5¼-inch floppy disks.

Processor accelerators can make your computer operate at blinding speeds; some claim to speed up your Apple IIe as much as 3½ times. For the *AppleWorks* owner, this speedup will translate to less time waiting for *AppleWorks* to calculate a spreadsheet or get back to the Main Menu. Accelerators are for the power user who takes *AppleWorks* to its limits.

Clock/calendars are hardware add-ons that automatically set the *AppleWorks* date; in addition, they date- and time-stamp your files. Some of these products even display the time of day on your *AppleWorks* screen. Although it's a luxury, once you have a clock/calendar, you won't see how you lived without one. (Apple IIGS owners don't need this add-on since their computer already has the feature built in.)

Software Products

Software products that enhance or are compatible with *Apple-Works* are a bit more diverse than hardware products. Since *AppleWorks* has the ability to read other types of files (including ASCII, *DIF*, *VisiCalc*, or *Quick File*), it is somewhat com-

patible with any products that can read or write these files. But these products are not actually *AppleWorks* add-ons. *Apple-Works* add-on products are comprised of desk accessories, stand-alone enhancement products, and templates.

Desk accessories are those products that can run at the same time *AppleWorks* is running and be accessed by a simple keypress. These products add extras that enhance your *Apple-Works* Desktop environment—tools such as calculators, alarm clocks, and notepads, and powerful extensions to *AppleWorks* such as macro programs and spelling checkers. Macro programs allow you to reduce any series of keypresses to a single Open-Apple-key command. The uses for macros alone are so extensive that you can imagine how a combination of add-ons increases the efficiency of *AppleWorks*.

Stand-alone products are those that must be booted by themselves. These products are designed to perform special functions with *AppleWorks* files, including spelling and grammar checking, business graphics, and print improvement.

Templates are *AppleWorks* Word Processor, Data Base, or Spreadsheet files that are already set up for very specific purposes. You use these files as you would any other *AppleWorks* files, but much of the thinking, planning, and typing has been done for you.

Below is a list of available enhancements for *AppleWorks*. They are listed by product name, and each entry includes a brief description of features, the type of product, and the manufacturer. Following the hardware list, we've listed some software products which are compatible with *AppleWorks*.

Memory Expansion

Apple IIc Memory Expansion Card
Apple's IIc version of memory expansion is installed internally and provides up to one megabyte of memory.
Apple Computer
(See your Apple dealer.)

Apple IIe Memory Expansion Card
This memory expansion card plugs into any of the Apple IIe internal slots and provides up to eight megabytes of extra

memory. *AppleWorks* version 2.0 automatically recognizes the extra memory and increases internal capacity in areas such as Desktop space, number of lines in the Word Processor, and number of records in the Data Base.
Apple Computer
(See your Apple dealer.)

Apple IIGS Memory Expansion Card

This card plugs into the memory expansion slot of the Apple IIGS and allows up to eight megabytes of RAM expansion. It increases the size of the *AppleWorks* Desktop and Clipboard, the number of lines in the Word Processor, and the number of records in the Data Base.
Apple Computer
(See your Apple dealer.)

Extended 80-Column Card

Apple's first memory expansion card plugs into the auxiliary slot of the Apple IIe and provides an extra 64K of memory. *AppleWorks* automatically recognizes the extra memory and increases the Desktop space to 56K.
Apple Computer
(See your Apple dealer.)

GSRAM

A memory expansion card which plugs into the memory expansion slot of the Apple IIGS and allows up to eight megabytes of RAM expansion. It comes with special software that loads *AppleWorks* into RAM automatically, increases *AppleWorks'* internal capacity, and adds a printer buffer.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

MultiRAM CX

This memory expansion card plugs internally into the Apple IIc and allows up to one megabyte of RAM expansion. Memory support software is included.
Checkmate Technology
509 S. Rockford Dr.
Tempe, AZ 85281

MultiRam Plus

MultiRam Plus is used with the MultiRam RGB expansion card and adds 15 extra megabytes of expansion. It also has an External Power Module option to protect your *AppleWorks* data against power failures, brown-outs, and user error.
Checkmate Technology
509 S. Rockford Dr.
Tempe, AZ 85281

MultiRam RGB

Plugs into the Apple IIe auxiliary (80-column card) slot and allows up to one megabyte of RAM expansion. It includes memory-support software.
Checkmate Technology
509 S. Rockford Dr.
Tempe, AZ 85281

RamFactor

This card plugs into any standard slot of the Apple IIe or IIGS and allows up to 16 megabytes of RAM expansion. It comes with special software that loads *AppleWorks* into RAM automatically, increases *AppleWorks'* internal capacity, and adds a printer buffer.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

RAMPAK 4GS

RAMPAK 4 plugs into the memory expansion slot of the Apple IIGS and allows up to four megabytes of RAM expansion. It has memory management software and dynamic cache allocation.
Orange Micro
1400 N. Lakeview Ave.
Anaheim, CA 92807

RamWorks III

RamWorks III plugs into the Apple IIe auxiliary (80-column card) slot and allows up to 16 megabytes of RAM expansion. Includes the same software that accompanies *RamFactor*.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

Z-Ram Ultra

This card plugs internally into the Apple IIc and allows up to one megabyte of RAM expansion. Includes Applied Engineering software and has a clock/calendar option available.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

Disk Drives

Apple Hard Disk 20SC

This 20-megabyte hard disk drive connects to your Apple IIe or IIGS via the Apple II SCSI Card.
Apple Computer
(See your Apple dealer.)

Apple 3.5 Drive

This 3½-inch disk drive gives you 800K of storage and connects to the SmartPort on your Apple IIGS.
Apple Computer
(See your Apple dealer.)

The Sider

A hard disk drive available in 10- and 20-megabyte configurations for the Apple II+, IIe, and IIGS.
Xebec
3579 Highway 50 East
Carson City, NV 89701

UniDisk

This 3½-inch disk drive gives you 800K of storage and is compatible with the Apple IIe, IIc, and IIGS.
Apple Computer
(See your Apple dealer.)

Clock/Calendars

No-Slot Clock

This unique clock/calendar plugs into the 28-pin EPROM socket on your Apple IIe motherboard, thereby requiring no slots.
SMT
1145 Linda Vista Dr., Suite 109
San Marcos, CA 92069

Timemaster H.O.

This is a system clock that plugs into the serial port of your Apple IIe. It time- and date-stamps your *AppleWorks* files and allows you to display the time and date on the *AppleWorks* screens.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

IIc System Clock

A system clock which plugs into the serial port of your Apple IIc. It time- and date-stamps your *AppleWorks* files and has software that allows you to display the time and date on the *AppleWorks* menu.
Creative Peripherals
22952 Alcalde Dr., Suite 160
Laguna Hills, CA 92653

Other Cards

SpeedDemon

This accelerator card plugs into one of your Apple II+/IIe slots and produces processing speed that is more than three times the normal Apple processing speed.
M.C.T.
11926 Santa Monica Blvd. #E
Los Angeles, CA 90025

TransWarp

This accelerator card plugs into one of your Apple II+/IIe slots and increases the overall speed of software running on your Apple.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

Viewmaster 80

This 80-column card has special software that lets you run *AppleWorks* on an Apple II+ with at least 64K of memory.
Applied Engineering
P.O. Box 798
Carrollton, TX 75006

Desk Accessory Software

AutoWorks

This multipurpose program runs in conjunction with *Apple-Works* as a desk accessory and features mail merge, file organizing, macros, mouse control, and new *AppleWorks* commands.
The Software Touch
9625 Black Mountain Rd., Suite 204
San Diego, CA 92126

Jeeves

This package includes the following pop-up desk accessories: Alarm Clock, Appointment Calendar, Calculator, Phone Book, Notepad, and Software clock.
PBI Software
1163 Triton Dr.
Foster City, CA 94404

KeyPlayer

This Pinpoint desk accessory allows you to replace many repetitive keystokes with a single one. It has features to edit macros, and adds programming functions such as Boolean operations, GOTO functions, and conditional branching.
Pinpoint Publishing
5901 Christie Ave., Suite 501
Emeryville, CA 94608

Pinpoint

This program runs alongside *AppleWorks* and can be accessed at any time without disturbing your work, files, or data. The package includes the following desk accessories which pop up on any *AppleWorks* screen at the touch of a key: Appointment Calendar, Calculator, Communications Window, Telephone Dialer, GraphMerge, Notepad, QuickLabel, and Typewriter. This product also acts as a shell to other *Pinpoint* add-ons, including the desk accessories *Spelling Checker* and *Key Player* (a macro program).

Pinpoint Publishing
5901 Christie Ave., Suite 501
Emeryville, CA 94608

Spelling Checker

This program allows you to check your spelling as you write because it runs simultaneously with *AppleWorks*, as a Pinpoint desk accessory. It features a 61,000-word dictionary, an alternate spelling aid, a word-count function, and editing capabilities. You can also add an unlimited number of words to the dictionary.

Pinpoint Publishing
5901 Christie Ave., Suite 501
Emeryville, CA 94608

Time-Trax II

An appointment-keeper calendar program that can be installed as a Pinpoint desk accessory.

Creative Peripherals
22952 Alcalde Dr., Suite 160
Laguna Hills, CA 92653

Macro Software

MacroWorks
Macro Program
This program gives full macro capabilites to *AppleWorks* versions 1.0 to 1.3. Features non-preboot starting and mouse control.
Beagle Brothers
3990 Old Town Ave., Suite 102-C
San Diego, CA 92110

Super MacroWorks
Macro Program
Like *MacroWorks* does for earlier versions of *AppleWorks*, this program gives full macro capabilites to *AppleWorks* version 2.0. Features non-preboot starting, mouse control, disk directory listings, pathname menus, and preprogrammed macros.
Beagle Brothers
3990 Old Town Ave. Suite 102-C
San Diego, CA 92110

Stand-Alone Software Products

Document Checker
Spelling Checker
This spelling checker is a more powerful version of Pinpoint's *Spelling Checker* program. It can batch-check as many as 16 *AppleWorks* documents and has the ability to create document-specific dictionaries.
Pinpoint Publishing
5901 Christie Ave., Suite 501
Emeryville, CA 94608

FontWorks
Printing Program
A printing program which reads your *AppleWorks* files directly and allows you to print them in 15 different typefaces. It has a font editor that allows you to customize your own fonts and prints sideways.
The Software Touch
9625 Black Mountain Rd., Suite 204
San Diego, CA 92126

Graphic Edge

Business Graphics

This product allows you to create business graphics directly from *AppleWorks* Spreadsheet files.
Pinpoint Publishing
5901 Christie Ave., Suite 501
Emeryville, CA 94608

GraphWorks

Business Graphics

This product allows you to create business graphics directly from *AppleWorks* Spreadsheets files.
PBI Software
1163 Triton Dr.
Foster City, CA 94404

InfoMerge

Mail Merge Program

InfoMerge can create form letters, invoices, reports, and other form documents by merging *AppleWorks* Word Processor files with files from the Data Base.
Pinpoint Publishing
5901 Christie Ave., Suite 501
Emeryville, CA 94608

MegaWorks

Mail Merge and Spelling Correction

This product has powerful mail-merge and spelling-correction capabilities. The mail-merge capability allows you to combine database information with word processing documents to create personalized form letters. The spelling-correction option features a 40,000-word dictionary and the ability to add 10,000 words of your own choosing.
Megahaus
6215 Ferris Square
San Diego, CA 92121

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PowerPrint
Printing Program
This printing-enhancement program allows you to print *Apple-Works* files in several different fonts. In addition, its font editor allows you to customize your own fonts and add graphics and borders to your documents.
Beagle Brothers
3990 Old Town Ave., Suite 102-C
San Diego, CA 92110

Print Quick
Printing Program
Print Quick allows you to print your *AppleWorks* files in several different typefaces. It has a font editor that allows you to customize your own fonts; there is also a hi-res screen dump feature included.
Third Wave Technology
11934 Lorain Ave.
Cleveland, OH 44111

Quicken
Financial Management
Use Quicken to transfer data to *AppleWorks* Spreadsheet files and to manage both home and business finances.
Intuit
540 University Ave.
Palo Alto, CA 94301

ReportWorks
Report Generation
This product reads your *AppleWorks* Data Base and Spread-sheet files and allows you to create reports, tables, lists, and full-page forms. It features the ability to integrate data from several different files into one report.
Megahaus
6215 Ferris Square
San Diego, CA 92121

Sensible Grammar

Proofreading Program

This program checks your *AppleWorks* files for common writing problems such as inconsistencies of style, capitalization and punctuation errors, inappropriate abbreviations, and so on.
Sensible Software
210 S. Woodward, Suite 229
Birmingham, Michigan 48011

Sensible Speller

Spelling Checker

This program checks your *AppleWorks* files for spelling errors.
Sensible Software
210 S. Woodward, Suite 229
Birmingham, Michigan 48011

Sideways

Printing Program

Sideways prints your *AppleWorks* Spreadsheet files horizontally on the paper rather than vertically, thus allowing you to get very large spreadsheets on one sheet of paper.
Funk Software
222 Third St.
Cambridge, MA 02142

Super ItWorks

Expansion Software

This special software allows you to run *AppleWorks* on Apple II+, Franklin, and Laser 128 computers. It will also expand your Desktop size and database record maximum with most RAM expansion cards on your Apple IIe and IIc.
Davka
845 N. Michigan Ave., Suite 843
Chicago, IL, 60611

ThinkWorks

Outline Processor

This product allows you to synthesize your ideas into complex outlines and then export them to *AppleWorks* files.
Megahaus
6215 Ferris Square
San Diego, CA 92121

Visualizer

IIe and IIGS Business Graphics

This stand-alone product allows you to create business graphics directly from *AppleWorks* Spreadsheet files. It can create pie charts as well as line, point, scatter, bar, and 3-D stacked bar graphs, and allows text and color printing.
PBI Software
1163 Triton Dr.
Foster City, CA 94404

Template Software

AppleWorks **Templates**

Custom templates for many different *AppleWorks* applications.
Pacific Technology Systems
Box 8005
Rockville, MD 20856

Business and Education Templates

Includes profit and loss, balance sheet, cash flow, ledgers, expenses, checks, petty cash, accounts receivable and payable, inventory, and payroll. The educational templates include grade books, grade calculators, midterm reports, and grade cards.
Climatech
21601 Pemberville Rd.
Luckey, OH 43443

Business Letters

These templates are professionally written letters that include sales letters, follow-up letters, collection notices, cancellation letters, résumé cover letters, and so forth.
The Q-mar Group
5677 Oberlin Dr.
San Diego, CA 92121

Classroom Tools

These templates include lessons on classification skills, biology, and comparison shopping for use as educational tools in the classroom.
Franklin, Beedle, & Associates
4521 Campus Dr., #327
Irvine, CA 92715

Collection Disk

Templates for the *AppleWorks* Spreadsheet, Data Base, and Word Processor. Includes a check register, reconciliation worksheet, credit card register, and loan analysis worksheet.
Q-mar Group
5677 Oberlin Dr.
San Diego, CA 92121

Computing Tools: *AppleWorks*

Miscellaneous templates for the Word Processor, the Spreadsheet, and the Data Base.
Minnesota Educational Computing Consortium
3490 Lexington Ave., North
St. Paul, MN 55126

Custom Templates

The Q-mar group has custom templates for all kinds of businesses, including building contractors and print shops.
The Q-mar Group
5677 Oberlin Dr.
San Diego, CA 92121

Factworks

Encyclopedic database covering a wide variety of interesting home and school topics. Includes over 90 files.
Imagimedia Software
16640 Roscoe Pl.
Sepulvedia, CA 91343

FormsWorks

Creates legal business forms to use with *AppleWorks*.
Brickhouse Software
P.O. Box 151, R.R. 2
Patterson, N.Y. 12563

General Ledger

Complete general ledger system for use in the *AppleWorks* Spreadsheet by small businesses and organizations.
The Q-mar Group
5677 Oberlin Dr.
San Diego, CA 92121

Gradeworks

A complete grading system for use with *AppleWorks*. This company will also set up custom grading systems for those with special needs.
Katama Software
RFD 304
Edgartown, MA 02539

Graph On

These unique templates allow you to create business graphs within your *AppleWorks* Spreadsheet application. They will create bar graphs, multiple bar graphs, stacked bar graphs, and pie charts.
The Q-mar Group
5677 Oberlin Dr.
San Diego, CA 92121

SchoolWorks

AppleWorks templates designed for school use. They include a gradebook, test maker, ledger accounts, sports statistics, and many more.
K-12 Micro Media Publishing
6 Arrow Rd.
Ramsey, NJ 07446

Social Studies Unit

A special group of templates to use in middle school social studies instruction. The package is called *Immigrant: The Irish Experience in Boston, 1840–1870.*
Stone Wiske, Educational Technology Center
Harvard Graduate School
337 Gutman Library
Appian Way
Cambridge, MA 02138

Tax Templates

AppleWorks tax spreadsheet templates to compute Forms 1040, 2106, 2441, 3468, 3903, 4136, 4137, 4255, 4797, 5695, 5884, and 6251, and Schedules A, B, C, D, E, F, G, R, SE, and W.
T & H Software
Box 578
Garfield, N.J. 07026

Teachers' Tools

These templates create a powerful grading system to be used in the *AppleWorks* Spreadsheet.
The Q-mar Group
5677 Oberlin Dr.
San Diego, CA 92121

1040Works

AppleWorks tax spreadsheet templates to compute Form 1040 and Schedules A, B, C, D, E, F, G, SE, and W.
Personal Finance Services
P.O. Box 1401
Melville, NY 11747

ZipFiles

Templates for use in *AppleWorks* Spreadsheet. Included are home finance, medical expert, tax, utility, and school spreadsheets.
Petit Design
Dept 13-M, 2650 S. Shore St.
Milwaukee, WI 53207

Chapter 6
Power User Tips

Chapter 6
Power User Tips

As you use *AppleWorks* more and more you'll begin to learn how to accomplish specific tasks more easily and learn to do things you may not at first have realized could be done. This chapter should help you on your way to becoming an *Apple-Works* power user.

General Tips

Memory expansion. If you have 64K or 128K of memory (RAM) in your computer, you will find that as your Word Processor, Data Base, and Spreadsheet files become larger—or as you add files to the Desktop—you run out of memory quickly. The solution is memory expansion. Apple and other companies produce memory expansion cards that will give your computer up to 16 megabytes of RAM (1600K)—far more than you will ever use in *AppleWorks*. These memory expansion cards give you more room on the Desktop and also expand the internal capacity of *AppleWorks* (for example, by increasing the potential number of lines in the Word Processor and records in the Data Base). With memory expansion, you can load the whole *AppleWorks* program into memory, which greatly increases the speed. *AppleWorks* doesn't have to go out to the disk to load parts of the program.

Memory expansion also gives you the availability of RAM disks. A RAM disk is a simulated disk drive that resides in memory. You can get (and save) files from (and to) RAM disks just as you do with your regular disk drive, but a lot faster.

Hard disk drives. With a hard disk drive, which can store 20 to 40 megabytes (or more) of information, you can forget about floppies forever. (Well, almost. You still have to buy programs and back up your hard disk on 3½- or 5¼-inch disks.) A hard disk allows you to have *AppleWorks*, all of your *AppleWorks* files, and all of your other programs on one disk. And with ProDOS subdirectories, you can organize your hard disk so that you can find files easily.

Macro programs. A macro program is an add-on product that allows you to activate a number of keypresses with just one keypress. (See Chapter 5, "Using *AppleWorks* with Other Products.") These programs add great power to *AppleWorks* and allow you to get your work done faster. For instance, you can create a macro that will print a document in the Word Processor and answer common questions like "Print from?" and "Where do you want to print the file?" and "How many copies?" with default answers. At a single keypress, your file will begin printing on your printer. You can create templates or even your own *AppleWorks* commands—maybe a shut-down command that saves all of your Desktop files and quits *AppleWorks* for you, or a template that automatically types your name and address.

A quick way to the main menu. To get quickly to the main menu from anywhere in *AppleWorks*, press OA-Q (Quick Change) to get to the Desktop Index and then press Escape to get to the Main Menu.

Word Processor Tips

Generally, what you see on the screen is what you get when the document is printed. There are, however, some exceptions to this rule.

- Printer options that you see on the screen as separate lines or carets are not printed, but are used instead to control the way the document is printed. Carets take up character spaces on the line, which makes the line look longer than it will be when printed.
- *AppleWorks* does not show boldface, underlined, subscript, or superscript text as such on the screen.
- If you are using a proportional font (P1 or P2), *AppleWorks* does not display the characters as proportional—all onscreen characters have the same width.
- If you are using double-spaced (DS) or triple-spaced (TS) text, *AppleWorks* still shows the text as single-spaced on the screen.

• Page breaks are not shown on the screen unless you use the Calculate command (OA-K).* Page headers (HE) and footers (FO) are not shown onscreen for every page. They only show up once on the screen (where you insert them using OA-O).

• If you are using a characters-per-inch setting (CI) that is larger than 10, the word-wrapping that you see on the screen will be different from what is actually printed.

Create your own templates. Try creating your own templates. You could have one with the standard headings and printer options that you use when creating a business letter. Then when you needed to write a letter, you would just load the template, change the name of the file, fill in the blanks, and type the letter. Templates can save you a lot of unnecessary typing and printer setup time. You can also purchase ready-made templates for *AppleWorks*. (See Chapter 5,"Using *AppleWorks* with Other Products.")

Page numbers. To get page numbers on every page, follow these steps.

1. Place the cursor at the beginning of your document.
2. Press OA-O to get to the Printer Options menu.
3. Create a header or a footer with the options HE or FO, respectively.
4. Before pressing Escape to return to your document, embed a Print Page Number option, PP.
5. Now Escape to your document.
6. You will see your header or footer print-option line with a caret (^) on the line below. This caret is the Print Page Number option. The line below a Header or Footer option line is the line used for the header or the footer.
7. Now edit the header or footer line as you like. You may enhance the page number by providing some extra formatting like *Page* ^ or -^-.

---

* Open Apple Commands, which require you to press the Open Apple key and some other key simultaneously, are indicated in this book with the letters OA.

Data Base Tips

Add some extra categories. Whenever you insert category names at the Change Name/Category screen, you lose any existing table or label report formats that you have created. To solve this problem, add some extra categories when you are setting up your database on the Change Name/Category screen. You can name them Extra1, Extra2, and so on. On the Change Record Layout screen, delete these extra categories. When you have a need for another category, just change the name of one of your extras and add it back to the layout. This way you won't lose your report formats.

    Refining a sort. If you want to arrange (OA-A) your records using more than one category, take care of the least important category first. Let's say you want to order your address list by last name and ZIP code, with ZIP code being the most important information. First order the records alphabetically using the last-name category. Then arrange it by ascending ZIP code. The resulting list will have an alphabetical arrangement within each ZIP code.

    Mailing labels. When creating mailing labels, use the following helpful hints.

- Use eight lines per inch if you need to print more information on your label. To do this, set LI to 8 on the Printer Options screen (OA-O).
- Set Paper Length (PL) on the Printer Options screen to the distance from the top of one label to the top of the next.
- Turn off Page Headers (PH) on the Printer Options screen.
- Set Omit Line (OL) and Keep Same (KS) to *Yes* on the Printer Options screen.
- Turn off *Accepts top-of-page commands* for your printer. This is accessed through the *Specifying information about your printer(s)* option on the Other Activities menu.
- Try some test runs on paper first to be sure the spacing is correct; then put in your labels.

Spreadsheet Tips

The cell indicator line. This is the line that is directly below the worksheet on your screen. This line displays important

information about the cell that the highlight bar is on. You can know every detail about a cell by looking at this line. First it shows the coordinates of the cell: the column letter and the row number. Then, in parentheses, it displays whether the entry in the cell is a label or a value. Also within the parentheses is a notation (OA-L) for any special layout other than the standard layout (OA-V) that governs the cell. A list of these notations follows (x indicates the desired number of decimal places.)

Layout-Fx Fixed value
Layout-Dx Dollar value
Layout-Cx Comma value
Layout-Px Percentage value
Layout-Ax Appropriate value
Layout-L Left-justified label
Layout-R Right-justified label
Layout-C Center-justified label
Protect-L Label protection
Protect-V Value protection
Protect-N No protection

After the right parenthesis is the actual entry itself, in its entirety. If the entry is a number that is calculated from a formula or function, the formula or function, rather than the calculated number, is displayed on the cell-indicator line.

Borders. Use repeated characters like = , - , and I to create borders that separate different information in your worksheet. Remember to first type a quotation mark ('') when entering a label that doesn't start with a letter. To create a vertical border, make the column one character wide and use the vertical bar character (I). You can create forms and invoices in your spreadsheet using this technique.

Set Recalculation to Manual. As your worksheet gets larger, you won't want to wait around for *AppleWorks* to calculate your formulas every time you change an entry, so set Recalculation to Manual and calculate it occasionally with the Calculate command (OA-K).

Integration Tips

All files on the Desktop. To ease integration, put all the files that you are integrating on the Desktop at the same time. When you need to copy or move information to a file, just

press OA-Q to see the Desktop Index and choose the file that is going to receive the information. This saves you the time of having to go to the Main Menu and get the file from the disk.

Data Base / Spreadsheet integration. You cannot use the Clipboard to copy or move information from the Data Base to the Spreadsheet or vice versa. Instead, you have to use *DIF* files on disk. To transfer Spreadsheet information to a Data Base file, follow these steps:

1. Print the Spreadsheet information to a *DIF* file on disk.
2. *AppleWorks* asks you in which order the *DIF* file should be created. Choose Columns.
3. Enter the ProDOS pathname for the file.
4. Starting from the option to add files to the Desktop, create a new Data Base file from a *DIF* file, and enter the ProDOS pathname that you gave in step 3.
5. Give your new file a name.
6. A new Data Base file is created where each column in the Spreadsheet file becomes a category in the Data Base file.

To transfer Spreadsheet information to a Data Base file, follow these steps:

1. Print the Data Base report to a *DIF* file on disk.
2. Enter the ProDOS pathname for the file.
3. Starting from the option to add files to the Desktop, create a new Spreadsheet file from a *DIF* file, and then enter the ProDOS pathname that you gave in step 2.
4. Give your new file a name.
5. A new Spreadsheet file is created where each category in the Data Base file becomes a column in the worksheet.

To convert a Word Processor document to a Data Base file, use a similar strategy, but use ASCII files instead of *DIF* files. When you create the new Data Base file from an ASCII file, you have to provide the number of categories that you want. *AppleWorks* then copies the Word Processor document a line at a time into these new categories, one line per category. When one record is full, it starts on the next one.

You will notice that you can't create a new Spreadsheet file from an ASCII file, so if you want to convert a Word Processor document to a Spreadsheet file, you must first convert it to a Data Base file.

Chapter 7
Ideas

Chapter 7

Ideas

Here is a collection of ideas for using *AppleWorks* at home, at school, and at the office.

AppleWorks At Home

Personal productivity measures in the home have finally met their match. With *AppleWorks* you can cut back on time normally spent in the areas of family finance, household inventory, correspondence, journals, recipes, and even Little League stat management.

Below is a list of further suggestions for applying *Apple-Works* at home, followed by a sample résumé produced with the Word Processor. Use the list as a reference tool in setting up and printing your own Word Processor files.

Travel Log (Spreadsheet / Data Base). Calculate per-mile expenses and depreciation; record travel diary of events and addresses of favorite stops along way; note names of people encountered.

Personal Worth Inventory (Spreadsheet). Include factors such as income, property (residence, recreational, and income property), assets (checking, savings, money market funds, CDs, T-bills, T-notes), securities (stocks, bonds, mutual funds), rate of growth on all investments, insurance, annuities, pensions, profit sharing, IRAs, and all liabilities (bills, charge accounts, medical and dental balances, taxes, mortgages, loans, credit cards). A more complex account might include such intangibles as years remaining until retirement and long-term business investment.

Taxes (Spreadsheet). Unless you already make use of a separate financial-management program, it makes sense to track your financial records using an *AppleWorks*-formatted spreadsheet, and then analyze those figures in order to quickly expedite your federal and state tax returns. A number of companion products are available that actually calculate your return for you using data imported from an *AppleWorks* Spreadsheet

file. Look for upcoming programs by Intuit (Tax Reform Analyzer) and others reflecting recent changes in tax laws to help with your tax return.

Car Shopper's Inventory (Word Processor / Data Base). Include items you're looking for in a new or used car, features you need as opposed to features you want, and variables that differ from one make to another to help you sort out and record your choices for future reference: name, address, and phone number of seller; make, model, year, license, asking price, mileage, extras; and performance evaluation (various factors affecting appearance, exhaust system, interior/exterior, electrical, starting, engine condition, and so on).

Word Processor Model: Creating a Premier Résumé

The résumé in Figures 7-1 and 7-2 is formatted with a number of print options that were embedded using the various commands listed below. To practice formatting a similar document, either type in this résumé, following the listed procedures as you go, or substitute your own text in place of ours. Either way, for this model, you must format as you type, rather than insert the print options into existing text. Certain print options used throughout the résumé—namely, Tab—have no effect on a preexisting document, but need to be in place before you enter text. (Remember, tabs create an environment for creating text. They don't act on existing text.)

1. To produce the slickest possible *AppleWorks* résumé, select a proportional font right from the start, by typing P1 or P2 at the Printer Options menu (OA-O).* If the following option settings don't seem to accommodate your printer's proportional fonts, revert back to the *AppleWorks* default text.

2. To extend the left and right margins as far out to the edge of the paper as is needed, reduce margins to .5 on the left, and 0 on the right. (You may have heard that one-page résumés really impress employers, but the *AppleWorks* default margins are much too wide to allow for this.) Note: If you use

---

* Open Apple Commands, which require you to press the Open Apple key and some other key simultaneously, are indicated in this book with the letters OA.

Figure 7-1. Résumé with Printer Options Displayed

```
File: Resume                  REVIEW/ADD/CHANGE              Escape: Main Menu
=====|=======================|===========================|=================
--------Proportional-1
--------Left Margin: 0.5 inches
--------Right Margin:  0.0 inches
--------Centered
                        ^Rufus K. Lagerfeld^
        ^540 E. Cologne Blvd., Prairie Village, KS 66207, (913) 642-3779^
--------Unjustified
--------Indent: 13 chars


^Objective^    ^Advertising Executive^ to oversee sales, marketing,
               production, and purchasing operations for major sportswear
               concern.

^Background^   Sales Executive, Public Speaker, and Author with 21 years
               experience in retail merchandising as New Accounts Executive,
               Sales Administrator, Regional Sales Representative, Research
               Analyst, Buyer.


^Professional Experience^
-------------------------------------------------------------------------
Type entry or use Ć commands        Line 1  Column 68       Ć-? for Help
```

the *AppleWorks* standard font instead of a proportional font, this model will run a bit longer than one page.

Enter the Printer Options Menu and type LM, for left margin; press Return. Enter .5 for the number of inches you want that margin to be; press Return. The left-margin print option line appears on the screen. Type RM and set the right margin to 0 in the same way. The print option line for the right margin also appears on the screen.

3. To center the first two lines of text (the name, address, and phone number) press CN and then Escape. Type in the name, address, and phone information.

To set these lines in boldface type, press Control-B at the beginning and end of each line. The option is not recognized for more than one line by the printer. Reenter the option separately for each line of text you want in boldface.

The option markers appear to add two spaces to each line of your text. Rest assured that any effect they have on text alignment as it appears on the screen won't show up on your printout. To avoid confusion, always save boldface and underline options for last.

4. Because the remaining text beneath the header needs to be formatted in various left-justified sections, the centering option from this point down needs to be turned off. With the cursor on the line below the heading, reenter the options menu (OA-P) and type UJ; this sets unjustified text for the remainder of the document.

Now that you have the hang of the Printer Options menu, we'll skip specific directions about setting options from this point on.

5. To set the main body of text away from the left margin in the Objective and Background paragraphs, first clear all tabs with OA-T and choice R (for Remove all).

Set a tab on column 14 so that the text will align evenly two spaces beyond the Background section head. (Move to column 14 and press S to set a tab.) Escape to return to Review/Add/Change.

Now, in order for the second line of text to wrap at column 13, (that's *after* 13 spaces; meaning text will really begin at column 14, right where we've set the first Tab) set an indent at 13. To set an indent use the Printer Option IN.

Type in the first two paragraphs, pressing Tab after each—that is, before the words *Advertising* and *Sales.*

6. Boldface the section heads, *Objective* and *Background,* as well as the words *Advertising Executive* in the first line of the Objective statement. Again, the printer option markers appear to offset the first line of each paragraph (and often the next line as well). This will not appear on the printout.

7. To create hanging paragraphs to the right of the section heads in the center portion of the document, use a combination of embedded Return characters at the end of the first line, and tabs with indented wraps throughout the rest of each paragraph. We'll use the Tab key to divide the first line of text into two separate paragraphs, to give the illusion that the job description to the right was pasted across from the company names and dates of employment.

Set the tabs to 26 and set indention to 25. Type in the Professional Experience section below where the embedded returns are and where the text wrapped itself onto the next line. The space created between the words *Regal Sportswear,*

Ltd. and *As Advertising Executive* is created with the Tab key. Separate *(1977–present)*, in the second line, and *Assisted division controller...* with a Tab, also. After the first two lines in these paragraphs, you can let the word-wrap feature take over, lining up each new line with the one above it.

8. Insert boldface options before and after each job title (before and after *As Advertising Executive* and *As New Accounts Executive*, for example).

9. Begin a new formatting procedure with the last three sections, Education, Awards and Achievements, and Personal Data. A shallower indent is needed in these lower sections to help set apart the central Professional Experience section.

Set the indent to 17 and insert another Tab at 18. (It may not seem necessary to set an indent for the lines in this section—they are all brief enough to be followed by Return characters and consequently do not require word-wraps—but *AppleWorks* nevertheless requires it. Without an indention setting here, the printer will not recognize Tab functions when used in conjunction with boldface text, which we will insert as our last step.)

Type in the section heading *Education,* and press Tab to go to column 18. Type in the remaining information, pressing Return after each line, and Tab to begin each new line.

Likewise, separate the beginning of the next section heading *Awards and* and the words *Author of Bestseller* with a Tab; press Return to complete that line. Type the rest of the section heading, *Achievements,* under *Awards and* before pressing Tab to begin typing the next item in the list.

As a finishing touch, place boldface options before and after each section heading (remember not to panic when the boldface markers throw off your column alignment), and use Control-L before and after *Sell to Win,* to underline the book title. (The underline option markers will appear to insert spaces in the same way the boldface option markers do.)

10. As a final step, press OA-K to calculate the document's page break for your particular printer. If the document

Figure 7-2. Résumé—Actual Printout

<div align="center">

Rufus K. Lagerfeld
540 E. Cologne Blvd., Prairie Village, KS 66207, (913) 642-3779

</div>

Objective	Advertising Executive to oversee sales, marketing, production, and purchasing operations for major sportswear concern.
Background	Sales Executive, Public Speaker, and Author with 21 years experience in retail merchandising as New Accounts Executive, Sales Administrator, Regional Sales Representative, Research Analyst, Buyer.

Professional Experience

Regal Sportswear, Ltd. (1977–present)	**As Advertising Executive** –Assisted division controller and accounting division in evaluating all financial implications of advertising plans. –Planned and expedited 40 new product promotions and realized 40 percent profitability average on each.
Adams Advertising (1970–1977)	**As New Accounts Executive** –Planned and presented new product debut and promotionals for St. Tropez II swimwear to public department store audiences nationwide; resulted in 29 percent net sales increase over nearest competition's entire line. Other responsibilities included conducting market research, field testing, and extended sales analysis in product design and packaging of St. Tropez Line. Conducted point of purchase sales seminars at Rutgers University Career Extension Program.
St. James, Inc. (1966–1970)	**As Sales Administrator** –Supervised all cost estimation and cost accountng for introduction of new sportswear line. Responsible for cost-cutting measures which reduced assets employed by $500,000, and increased year-end profits 13 percent.
Education	Graduate in Fashion Merchandising, June 1964 California College of Fashion and Design, San Francisco M.S. degree in Business, January 1966 University of Kansas, Lawrence
Awards and Achievements	Author of Bestseller, <u>Sell to Win</u> Honorary Member, Marketing and Public Relations Faculty Chamberlain University Salesman of the Year, 1970 Numerous Advertising Association Plaques Alpha Lamda Chi Special Award
Personal Data	Married, two children; Member, Advertising Executive's Club; Greater Kansas City Rotary Club

does not appear entirely on one page, adjust the top and bottom margins in the Printer Options menu, setting only the smallest allowable space for each.

Once you're satisfied with all printer-option settings, print away.

AppleWorks in the Schools

AppleWorks is no stranger to school administrators and teachers whose jobs have traditionally required the management of large quantities of student- and course-related data. A few specialized applications include creating personalized room schedules, class schedules, and appointment calendars; department memos; curricula proposals; and lesson plans.

The list below outlines a number of additional ways to put *AppleWorks* to use in the classroom, followed by a model of a class list database which you can duplicate to set up your own student information records.

Suggestions for School Use of *AppleWorks*

Gradebook Management (Spreadsheet). The electronic gradebook is a classic example of *AppleWorks* at work in the classroom. While a number of add-on gradebook templates exist for use with Apple II computers, you can create your own in the *AppleWorks* Spreadsheet.

Set up columns with the names of students, your grading scale, any number of tests or assignments, and the weight each score will have in a student's overall grade point average (or you can set up formulas to calculate total points instead of grade point averages). Use the Arrange command to rank students according to their grades in order to see which students are having difficulty.

If you have other classroom-management files on the same disk, you can easily transfer grade totals from the gradebook to these files using the Clipboard.

A helpful gradebook model for *AppleWorks* users is described in detail in the February 1987 issue of *inCider* magazine.

Progress Reports and Report Cards (Spreadsheet / Word Processor). Create your own to suit any unique needs you may have and merge grade-point-average data from your gradebook using the Mail Merge print option. Include features like spaces for comments and parental signatures, or set a comments category in a table record for each student and merge that category onto the report card as you would merge grades.

Math Tests and Assignments (Spreadsheet). Tailor problems to specific curriculum being taught in other units, like science, social studies, or home economics, to enhance continuity between them.

Library/Equipment Inventory (Data Base). Record all relevant data for each book or piece of equipment and use the computer in class to record check-out information when a student wants to borrow something.

Encyclopedia Templates (Data Base / Word Processor). To incorporate available banks of computers, make *AppleWorks* available to students for use with commercial learning templates *(FactWorks* by Imagimedia is one) and design tailor-made worksheets to correspond to various subjects offered.

Computer Education (Data Base / Spreadsheet / Word Processor). Teach students to set up a Data Base, Spreadsheet, or Word Processor document as a supplement to regular computer-learning classes.

A Model Classroom Database

The following database provides one approach to student data maintenance. Information on each student is ordered into tailor-made categories. Additional categories can always be added to meet specific needs. Follow the setup procedures below using your own student data if you like. Further suggestions of ways to utilize a class list like this one follow these setup instructions.

1. Create a new Data Base file from scratch and name it Class List. At the Change Name/Category screen, give your categories names. The names we chose are listed on the screen below. In addition to classic roster information (name, address, phone number, and so on), we included other categories like nicknames and parents' names to facilitate the use of the Mail Merge feature in creating letters and report cards, and other such vital information used to track learning progress, record keeping, and the like.

2. Press Escape to go to Insert New Records. After passing through Review/Add/Change (you can't stay there since you have no records entered yet), fill in the categories for each

Figure 7-3. Change Name/Category Screen

```
File: Class List           CHANGE NAME/CATEGORY    Escape: Review/Add/Change


Category names
===========================================================================
First Name                          I
Nickname                            I  Options:
Last Name                           I
Address                             I  Change filename
City/State                          I  Return    Go to first category
Zip Code                            I
Phone Number                        I
Father's Name                       I
Mother's Name                       I
Gender                              I
ID Number                           I
Reading Level                       I
Math Level                          I
                                    I
                                    I
-------------------------------------------------------------------------
Type filename:  Class List                                  49K Avail.
```

record, one record at a time. After completing the last category, press Return to go to the next record.

Should you acquire new students midsemester, more student records can be entered by using OA-I. You can also add information for new students by finding the final student record in single-record layout and scrolling to the last category entry at the bottom of the screen. A prompt appears, asking whether you really want to begin inserting new records. Press Escape to go to the Review/Add/Change screen.

3. To arrange your class list alphabetically, place the cursor on the Last Name category and press OA-A. Choose the arrangement order from A to Z.

4. Now you can put your class list to work. For starters, we'll look at a list of all female students who are in level 1 math and reading groups. First use OA-L to go to the Change Record Layout screen where you can tailor the screen display to your specific needs. You need to start out there to group the first-name, last-name, gender, math, and reading-level categories together to be seen on one screen display. (Multiple-record layout is horizontally static. You can't scroll to see categories that are off the screen, like you can in the Spreadsheet. The few that are displayed are not always the ones you want to work with.)

From the Change Record Layout screen, use OA-D to de-
lete unnecessary categories from your layout. Then Escape to
display your information in multiple-record layout.

Figure 7-4. Review/Add/Change Showing All Records with Specified Categories

```
File: Class List              REVIEW/ADD/CHANGE              Escape: Main Menu

Selection: All records


First Name      Last Name       Gender          Math Level      Reading Level
==============================================================================
William         Anderson        Male            1               1
Andrea          Bernal          Female          1               3
Daniel          Bohn            Male            3               3
James           Burns           Male            2               2
Ellen           Cassidy         Female          2               1
Cheryl          Cavanaugh       Female          1               2
Benjamin        Chen            Male            3               3
Fred            Davenport       Male            1               3
Rosa            De Lar          Female          1               1
Rachelle        Edwards         Female          3               3
Donald          Gates           Male            2               2
Tim             Gibbs           Male            2               3
Paul            Gray            Male            1               1
Blair           Green           Male            1               1
Kevin           Jackson         Male            2               1
------------------------------------------------------------------------------
Type entry or use Ç commands                            Ç-? for Help
```

5. To set selection rules to see all female students in the
level 1 math and reading groups, type OA-R to go to the Se-
lect Records menu. Follow the instructions on the prompt line
to set the following rules: Gender equals Female and Reading
Level equals 1.

Figure 7-5. Review/Add/Change Showing Selection Rules

```
File: Class List              SELECT RECORDS         Escape: Review/Add/Change

Selection: Gender equals FEMALE
    and      Reading Level equals 1
    and
==============================================================================
    1.  First Name
    2.  Nickname
    3.  Last Name
    4.  Address
    5.  City/State
    6.  Zip Code
    7.  Phone Number
    8.  Father's Name
    9.  Mother's Name
   10.  Gender
   11.  ID Number
   12.  Reading Level
   13.  Math Level



------------------------------------------------------------------------------
Type number, or use arrows, then press Return                   49K Avail.
```

6. Should you want to use the first and last names in the class list as a springboard for creating a gradebook database, you must pit yourself against a slight *AppleWorks* limitation. You cannot simply select the two desired categories—first and last names—from the class list and copy them into a fully functioning gradebook using the Clipboard. The Data Base only allows intact copies of entire record contents to be transferred to the Clipboard.

Instead, save the class list to a new name, perhaps Gradebook, and delete all unwanted categories, leaving just last name and first name as categories 1 and 2. Enter new categories for various subjects and grading conventions.

7. Now we're ready to use the Mail Merge feature. We want to send a form letter to the parents of each student to report the reading and math level status of their child and to suggest the possibility of a parent-teacher conference.

Before you compose your letter, you need to create a table layout at the Report Format screen. It would seem logical to start the letter first, in order to formulate ideas on the types of information to glean from the Data Base file for use in the letter. But *AppleWorks* needs to have immediate access to actual report data in order to let you set markers (places where data is to be inserted) in the form letter, so it's best to save the letter writing for last.

From the Data Base, press OA-P to see the Report Menu and select the option to create a new tables format. Name the report and delete all unwanted categories. At this point, you're probably wondering what to do with single parents on our list. It will be necessary to tailor our letter to three different sets of parents with greetings for Mr. and Mrs., Mr., and Mrs. (We have no Ms. or Miss parents on our sample class list.) It's not too difficult to select those groups of records one at a time and to edit the letter in order to accommodate each circumstance. Let's do Mr. and Mrs. parents first. Using OA-R, select only those records where the mother's name is not blank and the father's name is not blank.

Print the new table report to the Clipboard (for Mail Merge) using OA-P again. Now that the report is on the Clipboard, don't try to add anything else to it, or all contents will be lost.

Create the following letter from scratch in the Word Processor, leaving markers in the text wherever Clipboard information (from the Data Base) will be placed. To leave a marker, place the cursor where you want data inserted, type OA-O, then MM for Mail Merge, and press Return. A list of categories appears from the Clipboard. Pick the appropriate data to be inserted here, and then answer No to the prompt-line query (so that *AppleWorks* will not substitute a blank line if the category should prove to be empty.)

Figure 7-6. Letter Showing Mail Merge Options

```
File: Resume              REVIEW/ADD/CHANGE           Escape: Main Menu
==== | ========================== | ====================== | ===============
                          February 2, 1988.


Mr. & Mrs. ^<Last Name>
^<Address>
^<City/State> ^<Zip Code>


Dear ^<Father's Name> & ^<Mother's Name>,

Today starts a new semester at Pacific Elementary, and I am
excited about the progress that our children have been
making in the areas of reading and mathematics over the last
few months. I just wanted to let you know how your child,
^<First Name>, stands in relation to the rest of the class.
There are three levels of reading and mathematics, level 1
being the most advanced. ^<First Name> is currently in
level ^<Reading Level> for·reading and level ^<Math Level>
for mathematics. If you would like to discuss your child's
progress in these subjects or have any questions or comments
-------------------------------------------------------------------
Type entry or use ⌂commands         Mail Merge          ⌂-? for Help
```

Print the document with the information merged, using OA-P. *AppleWorks* executes as many printouts as there are records on the Clipboard. Return to the Data Base and create a new table layout for single mothers, reformat the letter with the appropriate greeting (Dear Mrs.), print it, and repeat the process for single fathers.

After you have printed all of the letters you'll want to go back to the Data Base and use a label report format to print the mailing labels. See Data Base power user tips in Chapter 6 for help on printing mailing labels.

Save the form letter to disk for later use as a template.

The following list of commands perform additional operations you can use with a class list like this one.

Figure 7-7. A Finished Letter

```
              From the Desk of Diane Johnson
                 Pacific Elementary School
        453 S. Stone St.  Solana Beach,  CA  92024
                        999-9900


                                        February 2, 1988


Mr. & Mrs. Anderson
4687 Treecrest Dr.
Solana Beach, Ca 92078

Dear William & Rose,

Today starts a new semester at Pacific Elementary, and I am
excited about the progress that our children have been
making in the areas of reading and mathematics over the last
few months.  I just wanted to let you know how your child,
William, stands in relation to the rest of the class.  There
are three levels of reading and mathematics, level 1 being
the most advanced.  William is currently in level 1 for
reading and level 1 for mathematics.  If you would like to
discuss your child's progress in these subjects or have any
questions or comments at all, I am available for conferences
on Friday, February 13 all day.  Please call the school
office to schedule an appointment.


Sincerely,
```

- Zoom to switch from multiple- to single-record layout to see all information available on any one student.
- OA-F to find a student's phone number so you can call to invite the parents to a class presentation.
- OA-D to permanently eliminate a student's record.
- OA-C to copy the complete contents from the class list to a separate gradebook Data Base file.
- OA-M to move all information for male students to a Data Base file of their own.
- OA-N to change the filename and take advantage of the opportunity to add new category headings to a Data Base file.

AppleWorks in the Office

AppleWorks seems to have been created with the office in mind. It provides just about every productivity tool now in demand in any "automated" office, except for the copy machine.

Word processors churn out business letters, contracts, business plans and proposals; spreadsheets work up their balance-sheet and cash-flow counterparts; and the database organizes inventory control, customer records, and invoicing. In the *AppleWorks* office, any and all of these can be produced and perfected at a single workstation by nonspecialized employees, thanks to the integrated nature of the program.

The following Spreadsheet model and the suggested *AppleWorks* business uses preceding it only begin to scratch the surface of what *AppleWorks* can do, and is doing, in the workplace.

Every business decision is based on some form of the balance sheet. Use the Spreadsheet to weigh specific sources of income against operating costs and expenses and arrive at the total equity for every facet of an operation. The following list specifies different functions a balance sheet might perform.

Office Suggestions

Stock Portfolios (Data Base / Spreadsheet). Use separate Data Base files to store applicable information on stocks common to each particular investment. Each record might include purchase price, volume, market purchased in, terms, dividends, broker, and so on. Use the Spreadsheet to compare desired rates of return on each sale, minus the broker's commission, and actual rates of return. Organize files into long-term investments, short-term investments, bonds, bills, and so forth.

Cost Estimates and Sales Projections (Spreadsheet). Integrate cost information for a new sales training program with expected projections on the net return of the program. The rows might list all transactions involved in planning, implementing, and maintaining the program, while column headings would list tests of liquidity (current ratio, quick ratio, inventory turnover, receivables turnover) to gauge the overall profitability of the program.

Forecasting and Proposal Integration (Spreadsheet / Word Processor). Use any number of forecasting techniques to create a pro forma financial statement. Base projections on the current period's financial statement, adjusted for any anticipated increase or decrease in sales, acqui-

sitions, wages, and so on. Include any tests of liquidity or profitability to substantiate a projection, like net sales divided by average receivables, or earnings before interest and taxes divided by average total assets. Integrate your findings into a proposal to either sink the plan or save it.

Project Management (Spreadsheet). In order to accurately plan a project, use the Spreadsheet to visualize the relationships between tasks required and available resources. Analyze the hours budgeted as the point of comparison against employee wages, the number of employees required to do the job, and a resource time line. Use an add-on graphics package like *Visualizer*, by PBI Software, to plot milestones, the critical path, and slack time on the time line.

Office Accounting (Spreadsheet / Data Base). Each spectrum of industry, whether service-related or product-related, requires uniquely tailored methods of billing, invoicing, inventory tracking, and scheduling. Use the Data Base to create custom billing for clients, distributors, and various creditors, and the Spreadsheet to track daily income totals, expenditures, and analysis. Third-party summarization products (*ReportWorks* from Megahaus Software is one such product) are helpful in combining information from a number of files to arrive at annual analyses of these totals.

A Model Loan Analyzer

The following model shows you the steps used to set up an example worksheet that calculates the monthly payment of a loan and lists the monthly balance and interest rate for every month of the loan. It also displays the yearly and total interest paid for the entire loan. Using this example you could create your own loan analyzer tailored for your own purposes and data.

1. Create a Spreadsheet file from scratch and name it Loan Analyzer.

2. Use OA-V to set up the standard values for this Spreadsheet file. Since most of the entries in this worksheet are dollar amounts, set Value Format to Dollars with two decimal places. Increase the column width by three characters to make the worksheet easier to read.

3. Skip five rows and one column at the top of your worksheet to give you room to add some title information later.

4. Starting with the highlight bar on B6, enter your loan data. Be sure to label items clearly.

- Loan Amount is the amount you are borrowing. It is $3,600 in this example and is in cell D6.
- Annual Interest Rate is a fixed rate of 13.9 percent and is in cell D7. Use OA-L to change the Value Format of this cell to Percent with two decimal places and enter the value as .139.
- Loan Term in Months is the number of months that you want to take to repay the loan. It is 60 months for this sample and is in cell D8. Use OA-L to set the Value Format of this cell to Appropriate.

5. Make a label for Monthly Interest and calculate it by dividing the yearly interest by 12. The formula in D10 is +D7/12, which calculates to 1.16 percent. Use OA-L to change the Value Format of this cell to Percent with two decimal places.

6. Use this formula to calculate the monthly payment:

Monthly Payment = (Loan Amount * Monthly Interest)/(1 — ((1 + Monthly Interest) — *Loan Term*))

In this example, the formula in D11 looks like this:

+D6*D10/(1 — ((1+D10)^ — D8))

It calculates to $83.58.

The calculation for Monthly Payment is finished, and the worksheet now looks like Figure 7-8.

Now add the table for monthly balance and interest.

7. In Row 13, label three columns: Month (B13), Balance (B14), and Interest (B15). Use OA-L to change the Label Format of these cells to Right Justify.

8. Enter 1 for month in cell B14. Using OA-L change the Value Format of this cell to Appropriate.

9. Enter +D6 in Cell C14 for the starting balance. This refers to the Loan Amount in cell D6.

Figure 7-8. Worksheet Showing Monthly Payment Calculated

```
File: Loan Analyzer1              REVIEW/ADD/CHANGE              Escape: Main Menu
==========A===========B===========C===========D===========E===========F======
  1|
  2|
  3|
  4|
  5|
  6|            Loan Amount ----------->   $3,600.00
  7|            Annual Interest Rate -->      13.90%
  8|            Loan Term in Months --->         60
  9|
 10|            Monthly Interest Rate ->       1.16%
 11|            Monthly Payment ------->     $83.58
 12|
 13|
 14|
 15|
 16|
 17|
 18|
--------------------------------------------------------------------------------
D11: (Value) +D6*D10/(1-((1+D10)^-D8))

Type entry or use Ċ commands                              Ċ-? for Help
```

10. Enter +C14*D10 in D14 to calculate the monthly interest rate for that month. It takes the Balance in C14 and multiplies it by the Monthly Interest Rate in D10.

11. For month 2 enter +B14+1 in cell B15. This is entered like this so it can be copied later. Use OA-L to set the Value Format of this cell to Appropriate.

12. Enter the formula (C14+D14)−D11 in cell C15 for month 2's Balance. This formula adds the first month's Balance (C14) to the first month's Interest payment (D14) and subtracts the Monthly Payment (D11).

13. Enter +C15*D10 in Cell D14 to calculate the Interest payment for month 2. It takes the Balance for this month (C15) and multiplies it by the Monthly Interest Rate (D10).

14. Use the Copy command (OA-C) to copy the calculations in month 2 to months 3–60. First place the highlight bar on cell B15 and press OA-C. Choose Within worksheet, highlight the other two cells (C15 and D15), and press Return. Now type a period so that you can copy the cells to several other places at the same time. Press the down arrow to highlight all the cells up to and including row 73 (where the values for the sixtieth month will be) and press Return. For each reference that is being copied, *AppleWorks* asks you whether it should be copied unchanged or copied relatively. Choose

Relative for every reference except D10 (Monthly Interest Rate) and D11 (Monthly Payment), which are static values.

15. *Important*: As you look at the Balance for the sixtieth month in cell C73, it reads $1,100.99. That can't be right; don't worry, it's not. The problem lies with the order of calculation. The standard order of calculation in *AppleWorks* is column-by-column. Since the formula for Monthly balance in column C references the Interest Payment in column D, column-by-column calculation does not work. Use OA-V to change the order of calculation to row-by-row. Now press OA-K to recalculate the worksheet. Cell C73 now reads $82.62. That's better.

If you scroll back to row 1 (Try OA-1), your worksheet will look like Figure 7-9.

Figure 7-9. Month, Balance, and Interest Calculations

```
File: Loan Analyzer2            REVIEW/ADD/CHANGE            Escape: Main Menu
=========A==========B==========C==========D==========E==========F======
  1|
  2|
  3|
  4|
  5|
  6|           Loan Amount ----------->  $3,600.00
  7|           Annual Interest Rate -->     13.90%
  8|           Loan Term in Months --->         60
  9|
 10|           Monthly Interest Rate ->      1.16%
 11|           Monthly Payment ------->     $83.58
 12|
 13|                   Month    Balance    Interest
 14|                       1  $3,600.00     $41.70
 15|                       2  $3,558.12     $41.21
 16|                       3  $3,515.76     $40.72
 17|                       4  $3,472.90     $40.23
 18|                       5  $3,429.55     $39.73
------------------------------------------------------------------------
D1

Type entry or use G commands                         G-? for Help
```

16. Scroll down to the bottom of the worksheet to enter the yearly interest payment formulas (see Figure 7-10).

17. In cell B75 enter the label Year and in cell C75 enter Interest. Use OA-L to right-justify both of these labels.

18. In cells B76 through B80 enter the years 1 through 5, and use OA-L to change the Value Format for these cells to Appropriate.

19. To calculate the interest payment for year 1 use the @SUM function to sum the interest payments for months 1

through 12. Enter the function @SUM(D14...D25), which eval-
uates to $467.11.

20. Do the same for years 2–5, substituting the correct
month range in the @SUM function for that year.

21. Enter the labels = = = = = = = = = = = = in cell C81
and Total in cell B82 to separate the yearly interest payments
from the total interest payment.

22. To calculate the total interest payment use the @SUM
function to add all of the yearly interest payments. Enter the
function @SUM(C76...C80) in cell C82, which evaluates to
$1,414.75.

The yearly interest payment schedule in the worksheet is
shown in Figure 7-10.

Figure 7-10. Yearly Interest Payment Schedule

```
File: Loan Analyzer2         REVIEW/ADD/CHANGE            Escape: Main Menu
========A==========B==========C==========D==========E==========F======
74 |
75 |                    Year     Interest
76 |                     1       $467.11
77 |                     2       $387.70
78 |                     3       $296.52
79 |                     4       $191.82
80 |                     5        $71.60
81 |                            =============
82 |        Total               $1,414.75
83 |
84 |
85 |
86 |
87 |
88 |
89 |
90 |
91 |
----------------------------------------------------------------------
C82: (Value) @SUM(C76...C80)

Type entry or use Ğ commands                        Ğ-? for Help
```

23. Go back to the top of the worksheet and enter a title
and information about what the worksheet does. Then save
your worksheet (OA-S) and print it (OA-P).

Figure 7-11 shows what our example looks like when
printed.

Figure 7-11. Loan Amortization Printout

```
File:   Loan Analyzer

        Loan Analyzer for 5 year loans.

        Enter Loan Amount, Annual Interest Rate and
        let AppleWorks do the rest.

        Loan Amount -----------> $3,600.00
        Annual Interest Rate -->    13.90%
        Loan Term in Months --->       60

        Monthly Interest Rate ->     1.16%
        Monthly Payment ------->    $83.58

            Month    Balance      Interest
              1    $3,600.00       $41.70
              2    $3,558.12       $41.21
              3    $3,515.76       $40.72
              4    $3,472.90       $40.23
              5    $3,429.55       $39.73
              6    $3,385.70       $39.22
              7    $3,341.34       $38.70
              8    $3,296.46       $38.18
              9    $3,251.06       $37.66
             10    $3,205.14       $37.13
             11    $3,158.69       $36.59
             12    $3,111.70       $36.04
             13    $3,064.16       $35.49
             14    $3,016.08       $34.94
             15    $2,967.44       $34.37
             16    $2,918.23       $33.80
             17    $2,868.45       $33.23
             18    $2,818.10       $32.64
             19    $2,767.16       $32.05
             20    $2,715.64       $31.46
             21    $2,663.51       $30.85
             22    $2,610.79       $30.24
             23    $2,557.45       $29.62
             24    $2,503.49       $29.00
             25    $2,448.91       $28.37
             26    $2,393.70       $27.73
             27    $2,337.85       $27.08
             28    $2,281.35       $26.43
             29    $2,224.20       $25.76
             30    $2,166.38       $25.09
             31    $2,107.90       $24.42
             32    $2,048.73       $23.73
             33    $1,988.89       $23.04
             34    $1,928.34       $22.34
             35    $1,867.10       $21.63
             36    $1,805.15       $20.91
```

```
37   $1,742.48        $20.18
38.  $1,679.08        $19.45
39   $1,614.95        $18.71
40   $1,550.08        $17.96
41   $1,484.46        $17.19
42   $1,418.07        $16.43
43   $1,350.92        $15.65
44   $1,282.99        $14.86
45   $1,214.27        $14.07
46   $1,144.76        $13.26
47   $1,074.44        $12.45
48   $1,003.30        $11.62
49     $931.35        $10.79
50     $858.56         $9.94
51     $784.92         $9.09
52     $710.43         $8.23
53     $635.08         $7.36
54     $558.86         $6.47
55     $481.76         $5.58
56     $403.76         $4.68
57     $324.86         $3.76
58     $245.04         $2.84
59     $164.30         $1.90
60      $82.62          $.96

Year    Interest
  1     $467.11
  2     $387.70
  3     $296.52
  4     $191.82
  5      $71.60
       =============
Total  $1,414.75
```

Chapter 8
Where to Get More Information

Chapter 8
Where to Get More Information

Books

Andersen, Dick, Janet McBeen, and Janice M. Gessin. 1986. *AppleWorks Tips and Traps*. Berkeley: Osborne/McGraw-Hill. Troubleshooting helps and time-saving tips.

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MENU. The International Software Database Corporation. 1987. *Apple II Guide*. Fort Collins, CO: MENU. A listing of 7800 products for Apple IIs, arranged by type (for example, Productivity, Education, Industrial). To be updated regularly.

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Williams, Robert E. 1984. *The Power of AppleWorks*. Portland: Management Information Source.

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Newletters

"Apple Education News." Apple Computer, Inc., 20525 Mariani Ave., M/S 23TB, Cupertino, CA 95014. Quarterly Apple publication features education-related news releases and profiles of educational software and hardware products, templates, and the people who produce/use them. Courtesy subscriptions available.

"*AppleWorks* Catalog." The Q-Mar group, 5677 Oberlin Dr., San Diego, CA 92121. Intermittently updated compilation of *AppleWorks* tools and information. Free upon request.

"Exclusive Reference." The Q-Mar group, 5677 Oberlin Dr., San Diego, CA 92121. Add-on product reviews, question/ answer columns, *AppleWorks* tips and tricks for all user levels. Published by volume number rather than monthly publication dates; 6-8 pages.

Appendices

Quick-Reference Command Charts

Word Processor

Command	Keypress	Action
Copy	OA-C	Copies text
Delete	OA-D	Deletes text
Edit	OA-E	Toggles between cursor insert and strikeover modes
Find	OA-F	Finds text, page, or marker
Hard Copy	OA-H	Prints hardcopy of current screen
Calculate	OA-K	Calculates page breaks
Move	OA-M	Moves text
Name Change	OA-N	Changes name of file
Printer Options	OA-O	Lists print options
Print	OA-P	Prints text
Quick Change	OA-Q	Switches to new desktop file
Replace Text	OA-R	Replaces text
Save	OA-S	Saves file(s) to disk
Tab	OA-T	Sets tabs
Clear	OA-Y	Clears from cursor position to end of line
Zoom	OA-Z	Displays formats
Ruler	OA-1 through 9	Moves to beginning, end, or proportional locations in between
Help	OA-?	Lists current options
Cursor Movement	OA-←	Moves cursor one word to left
	OA-→	Moves cursor one word to right
	OA-↑	Scrolls up one display
	OA-↓	Scrolls down one display

Data Base

Command	Keypress	Action
Arrange	OA-A	Arranges category
Copy	OA-C	Copies records
Delete	OA-D	Deletes records or categories
Edit	OA-E	Toggles between cursor insert and strikeover modes
Find	OA-F	Finds records
Group	OA-G	Adds or removes group totals
Hard Copy	OA-H	Prints hardcopy of current screen
Insert	OA-I	Inserts record or category
Justify	OA-J	Justifies category in report
Calculate	OA-K	Calculates page breaks
Layout	OA-L	Changes record layout
Move	OA-M	Moves records
Name Change	OA-N	Changes name of file, category, or report
Printer Options	OA-O	Lists print options
Print	OA-P	Allows you to see report menu or print report
Quick Change	OA-Q	Switches to new desktop file
Record Selection	OA-R	Changes record selection
Save	OA-S	Saves file(s) to disk
Totals	OA-T	Adds/removes report category totals
Value	OA-V	Sets standard values
Clear	OA-Y	Clears from cursor to end of line
Zoom	OA-Z	Switches from single- to multiple-record layouts
Ruler	OA-1 through 9	Moves to beginning, end, or proportional locations in between
Help	OA-?	Lists current options
Cursor Movement	OA-←	Changes category size
	OA-→	Changes category size
	OA-↑	Scrolls up one display
	OA-↓	Scrolls down one display

Spreadsheet

Command	Keypress	Action
Arrange	OA-A	Arranges rows
Blank	OA-B	Blanks out cells
Copy	OA-C	Copies entries
Delete	OA-D	Deletes rows/columns
Edit	OA-E	Toggles between cursor insert and strikeover modes
Find	OA-F	Finds entries or text
Hard Copy	OA-H	Prints hardcopy of current screen
Insert	OA-I	Inserts rows/columns
Jump	OA-J	Jumps to other window
Calculate	OA-K	Recalculates worksheet
Layout	OA-L	Changes cell layout
Move	OA-M	Moves rows/columns
Name Change	OA-N	Changes name of file
Printer Options	OA-O	Lists print options
Print	OA-P	Prints worksheet
Quick Change	OA-Q	Switches to new desktop file
Save	OA-S	Saves file(s) to disk
Titles	OA-T	Freezes titles
Value	OA-V	Sets standard values
Window	OA-W	Creates window
Clear	OA-Y	Clears from cursor to end of cell
Zoom	OA-Z	Displays formulas
Ruler	OA-1 through 9	Moves to beginning, end, or proportional locations in between
Help	OA-?	Lists current options and standard settings
Cursor Movement	OA-←	Scrolls one screen to left
	OA-→	Scrolls one screen to right
	OA-↑	Scrolls up one display
	OA-↓	Scrolls down one display

Appendix B
Keyboard Template

⌘-7: | 8 | ⌘-8: | 9 | ⌘-9:
MOVE
TO END | 0 | — | + | delete

U | ⌘-U:
EDIT
CELL
CONTENTS | I | ⌘-/:
INSERT | O | ⌘-0
PRINTER
OPTIONS | P | ⌘-P
PRINT | {
[| }
] | |
\

⌘-H
ARD
OPY | J | ⌘-J:
JUSTIFY;
JUMP | K | ⌘-K:
CALCULATE | L | ⌘-L:
LAYOUT | :
; | "<br>' | ⌘-":
COPY
ABOVE
CATEGORY | return

N | ⌘-N:
NAME CHANGE | M | ⌘-M:
MOVE | <
⌘-<:
SWITCH
CATEGORY
TO LEFT | >
⌘->:
SWITCH
CATEGORY
TO RIGHT | ?
⌘-?:HELP
-?:HELP | shift

CKY SPACE | | ⌘ | ←··
⌘-←:
SKIP
CURSOR LEFT;
COL. WIDTH | ··→
⌘-→:
SKIP
CURSOR RT;
COL. WIDTH | ⌘-↓:
SCROLL
SCREEN
DOWN | ⌘-↑:
SCROLL
SCREEN
UP

225
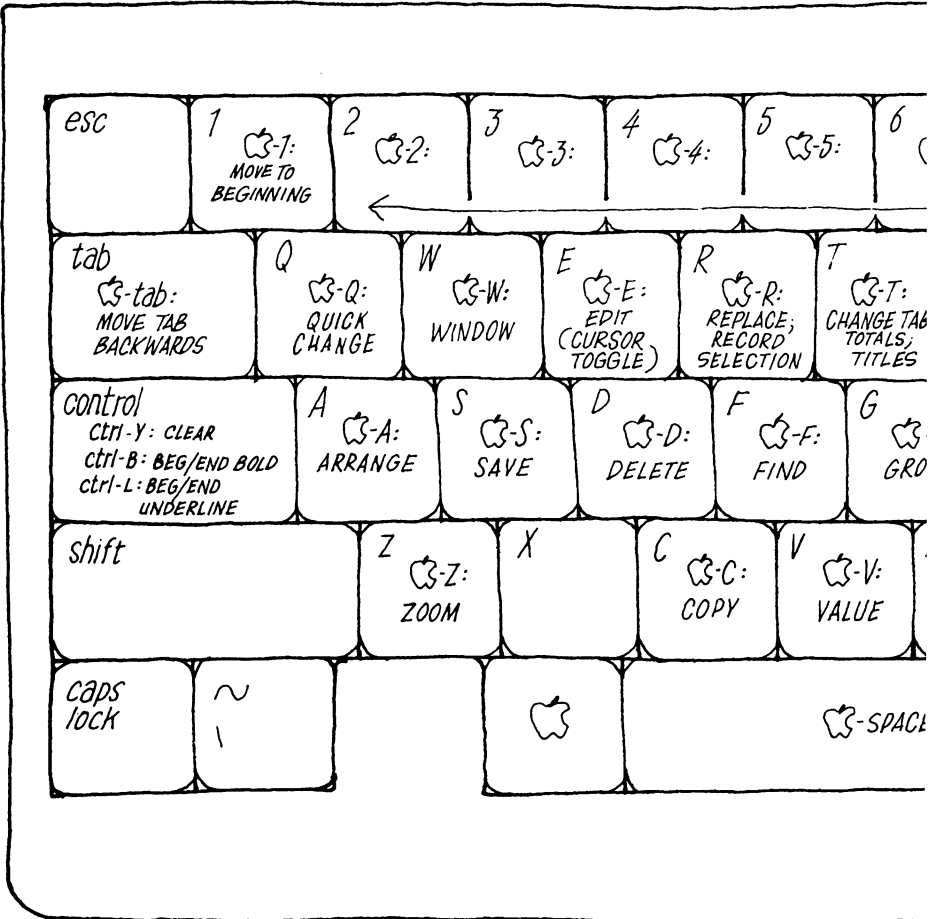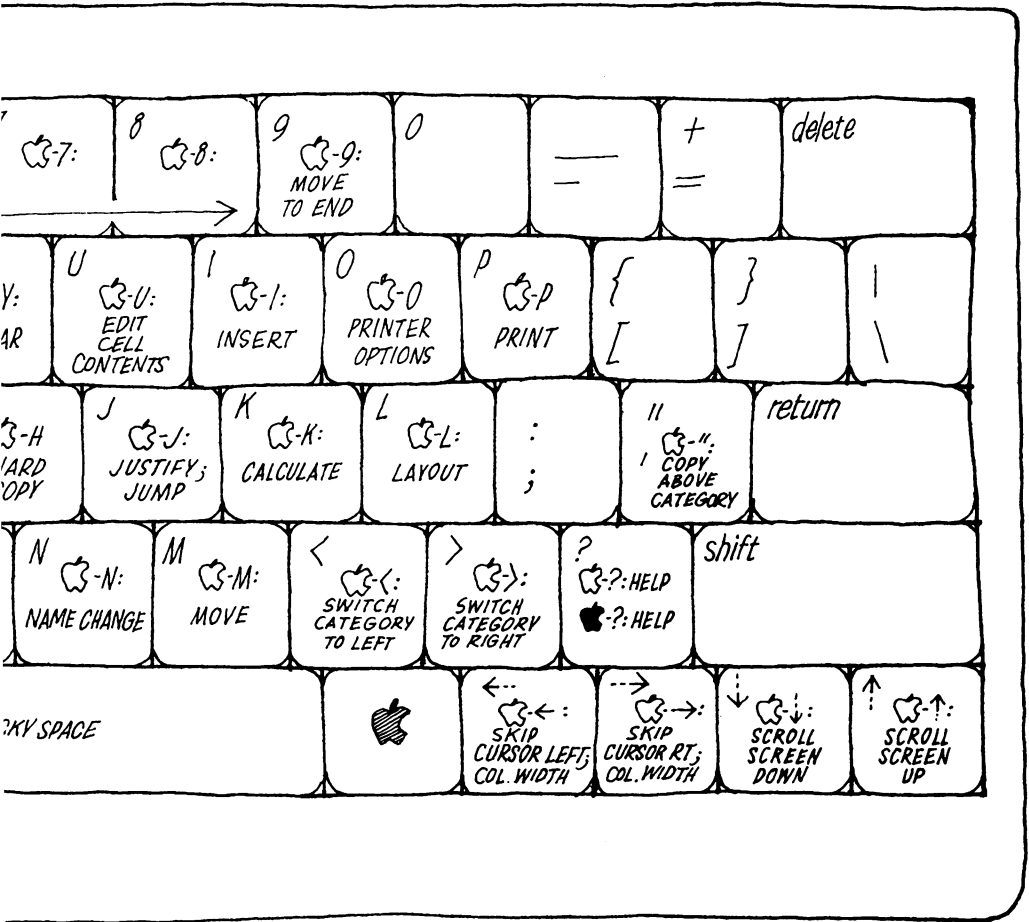
Glossary

argument
The values in a spreadsheet that a specific function operates on.

category
A field of information in the Data Base usually arranged into columns that you label according to the type of information it contains.

cell
The intersection of a row and a column where information is entered into a spreadsheet.

column
A vertical space for information, the width of which varies in the three applications: in the Word Processor, one character wide; in the Data Base and in the Spreadsheet, any width you specify.

command
Any single keypress or combination of keypresses that will perform a predetermined function. Most are performed by pressing the Open Apple key and another key simultaneously.

current location
The disk, disk drive, or subdirectory setting on the Other Activities menu where *AppleWorks* goes to find or save files.

***DIF* files**
Spreadsheet or Data Base files formatted in the Data Interchange Format. *AppleWorks* can understand *DIF* files as long as they are translated into ProDOS files before use with *AppleWorks*.

directory
A list of files on a disk.

function
An operation that results in the calculation of values in the Spreadsheet. To perform a function, you must supply an argument.

insert edit
A method of text entry in the Word Processor allowing the cursor to displace existing text as new text is entered. Toggles to strikeover edit using OA-E.

label report
One of two ways to display Data Base reports in preparation for printing labels in a vertical format.

marker
A place holder that is embedded into a file to indicate where information from the Clipboard will be printed. Markers are set using the Mail Merge printer option.

multiple-record layout
One of two ways you can display information in the Data Base, showing records in rows and categories in columns. (See also: single-record layout.)

pathname
A filename that describes a specific "path" taken by the operating system to find that file. It's used to construct a subdirectory. Slashes separate each part of a complete pathname which begins with the name of the disk, followed by the name of the subdirectory, and ends with the specific filename (for example, /Pub.Relations/Academy/Memos).

pointer
A code used in a Spreadsheet cell, formula, or function to refer to the contents of a specific cell. It begins with a plus or minus sign, and uses cell coordinates, as in +D12. Also called a reference formula.

ProDOS
A computer operating system that allows your program to talk to your computer and your disk. *AppleWorks* runs on ProDOS.

program disk
The disk containing an application, such as *AppleWorks*, which may require a startup disk to begin operating.

prompt
The line at the bottom of the screen that expects a reply before allowing the program to continue.

record
All the information about an item in the Data Base which may consist of a number of categories. Records can be seen in two layout styles: multiple-record layout and single-record layout. In multiple-record layout, records appear as rows.

reference formula
A code used in a cell, formula, or function to reference another cell in the Spreadsheet, as in +D12. Also called a pointer.

report style
One of two ways to display Data Base reports to prepare for printing: table style and label style.

Review/Add/Change
The first display you see in the Word Processor or Data Base where fundamental changes are made to a file.

row
A horizontal space for information in the Data Base and Spreadsheet.

single-record layout
One of two ways to display information in the Data Base, vertically listing all the categories in a single record.

standard location
Where *AppleWorks* looks for files or saves files to unless the current location setting is changed on the Other Activities menu.

startup disk
The disk used to initially begin operating an application. In *AppleWorks*, the startup disk is distinct from the program disk.

strikeover edit
In the Word Processor, a method of text entry causing the cursor to type over and delete existing text. Toggles to insert edit by pressing OA-E.

subdirectory
A file that lists other filenames, used to organize disks so that specific types of files are accessed from the same major heading. A directory within a directory. The major heading is called a pathname.

table report
A way of displaying Data Base records in rows and columns used in preparation for printing.

toggle
A switch that alternates a particular feature from one function to another. For example, the OA-E command toggles the cursor between the insert edit function and the strikeover edit function.

value
In the Spreadsheet, a number in a cell expressed alone or referenced by a function or formula.

window
One of two possible ways of displaying a spreadsheet. A single window uses the whole screen. A double window simultaneously displays two separate views of the same worksheet.

worksheet
Another name for a Spreadsheet file; any product of the Spreadsheet.

wraparound
The feature used mostly in the Word Processor that automatically moves text down to the next line, eliminating the need to press Return at the end of each line of text. Also called word-wrap.

write protect
Protecting a disk from being written on. Program disks are often write protected, as is *AppleWorks*, making the use of backup copies necessary.

Zoom
A command that changes the way an application is displayed.

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@ *See* at sign
^ *See* caret
− *See* dash
See number sign
'' *See* quotation mark
/ *See* slash
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